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OF THE

# AMERICAN JOURNAL

OF THE

# MEDICAL SCIENCES.

NO. XIX. NEW SERIES.

JULY, 1845.

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THE

# AMERICAN JOURNAL

OF THE

# MEDICAL SCIENCES

FOR JULY, 1845.

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ARTICLE I.—*Table showing the Mortality following the operation of Tying the Subclavian Artery.* By GEORGE W. NORRIS, M. D., one of the Surgeons of the Pennsylvania Hospital.

THE subjects of aneurism and of hemorrhage are of the highest interest and importance, and are justly pointed to by the surgeon, as well to show the proficiency of his art, as the benefits conferred by it upon the human family. Notwithstanding, however, the great improvements made in the surgical treatment of these affections, the mortality attendant upon the tying of large vessels is still great. Of one hundred and seventy-one cases of ligature of the larger arteries, operated on by Hunter's method and furnished by Mr. Phillips, fifty-seven, or one in three, proved unsuccessful; and of these, all but two are stated to have died in consequence of the operation. Upon looking over a table of cases which I possess, where the subclavian was the seat of operation, I find that the mortality, following the Hunterian method upon it, is even greater than has been asserted by Mr. Phillips.

The table includes sixty-nine cases—nearly all, I think, that have been recorded—and embraces those in which the ligature was applied below the clavicle, as well as those in which the artery was exposed within the scaleni muscles, either for the arrest of hemorrhage, or for the cure of disease.

| No. | Surgeon. | Sex. | Age | Right or left side. | Disease. | Duration of disease. | Ligature separated. |
|---|---|---|---|---|---|---|---|
| 1* | Keate | Male | 25 | | Aneurism | | |
| 2 | Ramsden | Male | 32 | Right side | Aneurism | 4 months | |
| 3 | W. Blizard | | Old | | Aneurism | | |
| 4† | Colles | Male | 33 | Right side | Aneurism | 2 months | |
| 5 | Colles | Male | 48 | Right side | Aneurism | 6 weeks | |
| 6 | Chamberlaine | Male | 25 | Left side | Aneurism from wound | 3 months | 13th day |
| 7 | T. Blizard | Male | 47 | Left side | Aneurism | 1 month | |
| 8 | Post | Male | 27 | Left side | Aneurism | 3 weeks | 18th day |
| 9 | Wells | Male | 61 | Right side | Aneurism | 7 months | 22d day |
| 10 | Dupuytren | Male | 37 | Left side | Aneurism | 7 years | 15th day |
| 11 | Liston | Male | 35 | Left side | Aneurism | 5 months | 12th day |
| 12 | Mayo | Male | 38 | Left side | Aneurism | 5 months | |
| 13 | Todd | Male | 35 | Right side | Aneurism | 4 months | 12th day |
| 14 | Key | | | | Aneurism | | |
| 15 | Gibbs | Male | 35 | | Aneurism | | 12th day |
| 16 | Travers | Male | 73 | | Aneurism | | |
| 17 | Baroni | | | | Wounded axillary | Some days after | |
| 18 | Brodie | Male | 56 | Left side | Aneurism | 2 months | |
| 19 | Bullen | Male | 60 | Right side | Aneurism | 4 months | 19th day |
| 20 | Key | Male | 36 | Right side | Aneurism | 6 weeks | 12th day |
| 21 | Galtié | Male | | | Hemorrhage following compound fracture of superior end of humerus | | |
| 22 | Wishart | Male | 47 | Left side | Aneurism | 3 weeks | 16th day |
| 23 | Arendt | Male | 30 | Right side | Aneurism | 1 month | 16th day |
| 24 | Liston | Male | 43 | Right side | Aneurism | 9 months | |
| 25 | Thorpe | Male | 36 | Right side | Aneurism | 14 months | 13th day |
| 26 | B. Cooper | Male | 38 | Right side | Aneurism | 3 months | |
| 27 | Gibson | Male | 35 | Left side | Ruptured axillary, from attempts to reduce a luxation | 2 days | |
| 28 | Balardini | Female | 50 | Right side | Aneurism | 3 months | 16th day |
| 29 | Dupuytren | Male | 40 | Right side | Aneurism | | |
| 30 | Porter | Male | 40 | Left side | Aneurism | 9 days | 17th day |
| 31 | Baker | Female | 18 | Right side | Tumour around head of humerus mistaken for aneurism | | |
| 32 | Crossing | Male | 46 | Right side | Aneurism | 13 weeks | 25th day |
| 33 | Mott | Male | 28 | Right side | Aneurism | 7 weeks | 15th day |
| 34 | Bland | Male | 63 | Right side | Aneurism | | 43d day |
| 35 | Buchanan | Male | 55 | Right side | Secondary hemorrhage after amputation | | |

* The ligature was here placed below the clavicle.

† The ligature was here placed internally to the scalenus muscle.

| Date of Operation. | Result. | Period of death. | Cause of death. | Work. |
|---|---|---|---|---|
| March, 1800 | Cured | | | London Med. Rev., vol. vi., 1801. |
| Nov. 9th, 1809 | Died | 5th day | Irritation from sloughing of tumour. | Practical Observations. |
| 1811 | Died | 4th day | Not stated. | Hodgson on the Arteries. |
| Oct. 10th, 1811 | Died | 4th day | Hemorrhage. | Edinburgh Med. and Surg. Journ., vol. xi. |
| July 16th, 1813 | Died | 3d day | Mortification of limb. | Edinburgh Med. and Surg. Journ., vol. xi. |
| Jan. 17th, 1815 | Cured | | | Med. Chirurg. Transacts., vol. ix. |
| Jan. 10th, 1815 | Died | 8th day | Gangrene of hand and arm. | Hodgson on the Arteries. |
| Sept. 8th, 1817 | Cured | | | Med. Chirurg. Transacts., vol. ix. |
| April 12th, 1818 | Cured | | | Amer. Journ. of Med. Sci., vols. iii. and xiii. |
| March 7th, 1819 | Cured | | | Edinburgh Med. and Surg. Journ., vols. xv. & xvi. |
| April 3d, 1820 | Cured | | | Edinburgh Med. and Surg. Journ., vol. xvi. |
| March 19th, 1821 | Died | 12th day | Inflammation of sac and pleura; had hemorrhage on the 8th, 9th, 10th and 11th days after operation. | Med. Chirurg. Transacts., vol. xii. |
| Feb. 8th, 1822 | Cured | | | Dublin Hospital Reports, vol. iii. |
| 1822 | Died | 7th day | Inflammation of sac, pleura and pericardium. | Med. Chirurg. Transacts., vol. xiii. |
| Jan. 5th, 1823 | Cured | | | Med. Chirurg. Transacts., vol. xii. |
| Jan. 17th, 1823 | Died | 3d day | Inflammation of cavity of chest. | Med. Chirurg. Rev., vol. vii. |
| Jan. 17th, 1823 | Cured | | | Gazette Médicale, No. xliv., 1835. |
| March 7th, 1823 | Died | 6th day | Gangrene. | London Med. and Phys. Journ., vol. ii., New Series, 1827. |
| April 3d, 1823 | Cured | | | London Med. Repository, vol. xx. |
| Sept. 20th, 1823 | Cured | | | Med. Chirurg. Transacts., vol. xiii. |
| 1823 | Died | 3d day | Exhaustion. | Chir. Clin. of Delpech, tom. i. |
| August 23d, 1823 | Cured | | | Edinburgh Med. and Surg. Journ., vol. xxi. |
| June 6th, 1826 | Cured | | | London Med. and Phys. Journ., vol. ii. N. S. |
| Sept. 14th, 1826 | Died | 14th day | Hemorrhage. | Edinburgh Med. and Surg. Journ., vol. xxvii. |
| June 21st, 1827 | Cured | | | Amer. Journ. of Med. Sci., vol. ii., 1828. |
| Dec. 4th, 1827 | Died | 2 months after | Sloughing of the sac. | Amer. Journ. of Med. Sci., vol. ii., 1828. |
| March 17th, 1828 | Died | 8th day | Gangrene of hand and fore-arm. | Amer. Journ. of Med. Sci., vol. ii., 1828. |
| Nov. 4th, 1828 | Died | about 1 mo. after | Suppuration of tumour. | Gazette Médicale, April, 1841. |
| June 12th, 1829 | Died | 7th day | | Lancet, vol. ii., 1833-34. |
| June 27th, 1829 | Cured | | | Dublin Hospital Reports, vol. v. |
| 1829 | Died | | | Lancet, vol. ii., 1828-29. |
| June 23d, 1830 | Cured | | | Med. Chirurg. Transacts., vol. xvi. |
| August 30th, 1830 | Cured | | | Amer. Journ. of Med. Sci., vol. vii. |
| Dec. 17th, 1830 | Cured | | | Amer. Journ. of Med. Sc., vol. ix. |
| May 1st, 1830 | Died | 4th day | Gangrene of stump. | Glasgow Journal, vol. iii. |

| No. | Surgeon. | Sex. | Age | Right or left side. | Disease. | Duration of disease. | Ligature separated. |
|---|---|---|---|---|---|---|---|
| 36 | Mayo | Male | 49 | Left side | Aneurism | 1 month | 18th day |
| 37 | Fergusson | Male | 60 | Right side | Aneurism | 2 years | 31st day |
| 38* | Mott | Female | 21 | Right side | Aneurism | A year or two | |
| 39 | Porter | Male | 63 | Left side | Aneurism | 5 weeks | 17th day |
| 40 | Brodie | Male | 56 | Right side | Aneurism | 11 weeks | |
| 41 | Lallemand | Male | | Right side | Wounded axillary | 1 day | 12th day |
| 42 | Auchinloss | Male | 65 | Left side | Aneurism | 18 months | |
| 43 | Nicol | Male | 68 | Left side | Medullary Sarcoma considered aneurismal | 13 months | |
| 44 | Nichols | Female | 21 | Left side | Aneurism | | 21st day |
| 45 | Segond | Female | 40 | | Aneurism from wound | 6 days | 11th day |
| 46 | Lizars | Female | 42 | Left side | Aneurism | 10 years | |
| 47† | Blasius | Male | | | Wounded axillary | 20th day | |
| 48 | Haspel | Male | | | Wounded axillary | Immediately after | |
| 49 | Hobart | Male | 38 | Right side | Aneurism | 4 months | 22d day |
| 50 | Earle | Male | | Left side | Supposed aneurism | | 16th day |
| 51* | Hayden | Female | 57 | Right side | Aneurism | 10 months | |
| 52† | Catanoso | Male | 33 | Right side | Wounded axillary | 14 days | |
| 53 | Suetin | Male | 44 | Left side | Aneurism | | 20th day |
| 54* | O'Reilly | Male | 39 | | Aneurism | | |
| 55 | Montanini | Male | 21 | Right side | Aneurism from wound | 16 days | 13th day |
| 56 | Rigaud | Male | 31 | Right side | Aneurism | | 13th day |
| 57 | Jobert | Male | 61 | Right side | Aneurism | 6 months | |
| 58 | Syme | Male | 23 | Left side | Aneurism from ruptured axillary | 1 month | |
| 59 | White | Male | | Left side | Aneurism from wound | 2 weeks | 17th day |
| 60 | Nott | Male | 30 | | Aneurism from wound | 3 months | 31st day |
| 61 | Skey | Male | | Left side | Aneurism | 2 months | 47th day |
| 62 | Hulton | Male | 35 | | Aneurism | 3 months | 12th day |
| 63 | Gross | Male | 36 | Right side | Aneurism | 18 months | 14th day |
| 64* | Partridge | Male | 38 | Right side | Aneurism | 12 months | |
| 65 | B. Cooper | Male | 50 | Left side | Aneurism | 6 weeks | |
| 66 | Hutin | Male | 26 | | Wounded axillary | 12 days | |
| 67 | McDougall | Male | 24 | Left side | Aneurism from gun-shot | 6 weeks | |
| 68 | Mott | Male | 35 | | Aneurism from gun-shot | 22 days | 15th day |
| 69 | A. C. Post | Male | 37 | Right side | Hemorrhage after amputation | | 27th day |

* The ligature was here placed internally to the scalenus muscle.

† The ligature was here placed below the clavicle.

| Date of Operation. | Result. | Period of death. | Cause of death. | Work. |
|---|---|---|---|---|
| March 26, 1831 | Cured | | | Med. Chirurg. Transacts., vol. xvi. |
| May 12th, 1831 | Cured | | | Edinburgh Med. and Surg. Journ, vol. xxxvi. |
| Sept. 22d, 1831 | Died | 18th day | Hemorrhage. | Amer. Journ. of Med. Sci., vol. xii. |
| Dec. 31st, 1831 | Cured | | | Dublin Journal, vol. i. |
| Dec. 13th, 1831 | Died | 6th day | Inflammation. | London Medical Gazette, vol. ix. |
| Feb. 19th, 1833 | Cured | | | Archives Générales, vol. xxxvii. |
| July 23d, 1833 | Died | 3d day | Effusion on brain. | Edinburgh Med. and Surg. Journ, vol. xlv. |
| Jan. 16, 1834 | Died | 25th day | Hemorrhage. | Edinburgh Med. and Surg. Journ., vol. xlii |
| April 30th, 1833 | Cured | | | Amer. Journ. of Med. Sci., vol. xii. |
| April 5th, 1834 | Cured | | | Journal Hebdomadaire, tom. i. 1835. |
| April 27th, 1834 | Cured | | | Lancet, vol. ii., 1833–34. |
| 1834 | Died | 2d day | | Med. Chirurg. Rev., vol. xx. |
| Feb. 4th, 1835 | Died | After some days | Mortification of arm. | Gazette des Hopitaux, 1839, p. 186. |
| May 7th, 1835 | Cured | | | Edinburgh Med. and Surg. Journ., vol. xlv. |
| April 14th, 1835 | Supposed cure | | | Amer. Journ. of Med. Sci., vol. xviii. |
| Sept. 15th, 1835 | Died | 12th day | Hemorrhage. | Amer. Journ. of Med. Sci., vol. xxi., 1837. |
| September, 1835 | Cured | | | Amer. Journ. of Med. Sci., vol. xx., and Ann. de Chirurgie. |
| 1835 | Died | 33d day | | Med. Chirurg. Rev., vol. xxii. |
| April 16th, 1836 | Died | 13th day | Hemorrhage. | Amer. Journ. of Med. Sci., vol. xxi., 1838. |
| June 28th, 1836 | Cured | | | Gazette Médicale, vol. v., 1837. |
| 1836 | Died | 6 weeks after | Suppuration of tumour. | Archives Générales, vol. xlii. |
| Nov. 22, 1837 | Died | 29th day | Hemorrhage. | L'Expérience, vol. i.. 1838. |
| Oct. 24th, 1837 | Cured after amputation at shoulder-joint, made necessary in consequence of return of hemorrhage. | | | Edinburgh Med. and Surg. Journ., vol. l. |
| Sept. 17th, 1838 | Cured | | | Amer. Journ. of Med. Sci., vol. xxiii. |
| Nov. 27th, 1838 | Cured | | | Amer. Journ. of Med. Sci, vol. ii., N. S., 1841. |
| 1840 | Cured | | | Lancet, vol. ii., 1840–41. |
| Jan. 8th, 1841 | Cured | | | Lancet, vol. ii., 1840–41. |
| Feb. 18th, 1841 | Died | 31st day | Tumour burst into cavity of chest. | Western Journ. Med. and Surg., June. 1841. |
| Feb. 20th, 1841 | Died | 4th day | Pericarditis and pleurisy. | London Med. Gaz., 1841. |
| May 18th, 1841 | Died | 15th day | Pleuro-pneumonia; some hemorrhage day of death. | Guy's Hosp. Reports, No. xiii., 1841. |
| 1842 | Died | 10th day | Hemorrhage. | Gazette Médicale, 1842. |
| Dec. 12th, 1841 | Died | 7th day | Hemorrhage. | Maryland Med. and Surg. Journal, vol. ii., Jan., 1841. |
| June 11th, 1844 | Cured | | | New York Journ. of Med., vol. iv. |
| Dec. 6th, 1844 | Cured | | | New York Journ. of Med., vol. iv. |

*Mortality.*—Of the sixty-nine cases included in the preceding table, thirty-six recovered, and thirty-three died.

*Sex.*—Of sixty-six cases in which the sex is noted, fifty-nine were males, and seven females. Of the seven females, six laboured under aneurism, and one presented a tumour around the head of the humerus, which was mistaken for it.

*Right or left side.*—Of fifty-four cases in which the affected side is mentioned, thirty-one were on the right, and twenty-three on the left side.

*Age.*—This is given in fifty-nine of the cases, of which number there

| | | |
|---|---|---|
| were under - - - - | 20 | 1 |
| between | 20 and 30 | 10 |
| " | 30 and 40 | 22 |
| " | 40 and 50 | 11 |
| " | 50 and 60 | 6 |
| " | 60 and 70 | 8 |
| above - | 70 | 1 |

*Disease or injury.*—Of the sixty-nine cases of operations mentioned in the table—fifty-six were done for the cure of aneurism—nine in consequence of wounds or secondary hemorrhages—one was made necessary in consequence of rupture of the axillary in an attempt to reduce an old luxation, and three were done for diseases supposed to be aneurismal.

*Period the ligature separated.*—In thirty-five of the cases in which it has been noted the ligature came away; in one, on the eleventh day; in six, on the twelfth; in four, on the thirteenth; in one, on the fourteenth; in three, on the fifteenth; in four, on the sixteenth; in three, on the seventeenth; in two, on the eighteenth; in one, on the nineteenth; in one, on the twentieth; in one, on the twenty-first; in two, on the twenty-second; in one, on the twenty-seventh; in two, on the thirty-first; in one, on the forty-third; in one on the forty-seventh; and in one on the eighty-fifth.

*Return of pulsation in the tumour after the application of the ligature.*—In three of the sixty-nine cases, pulsation returned in the aneurismal tumour after the operation. In one of these (No. 12) it was discovered thirty hours after the operation, and the patient died after repeated hemorrhages. In the second case (No. 11) it was noticed the day after the operation, and disappeared in two days, the patient recovering, and in the third instance (No. 60) it was observed two days after the operation, and at the end of forty days was still strong, though ultimately the disease was cured.

*Hemorrhage after the operation.*—With three exceptions, all the cases in which secondary hemorrhage followed the operation, proved fatal. In two of these (Nos. 19 and 52) it occurred before the separation of the ligature, on the sixteenth and nineteenth days, and, in the third case (No. 37) it came on on the fourth and fifth days after the ligature had been cut off.

*Bursting of the tumour.*—In six cases the tumour is stated to have sup-

purated, and either to have been opened or to have burst externally after the operation. Of these, four were cured (Nos. 8, 30, 37, and 62), and two died. In two of them the suppuration did not occur till about the seventh week after the operation, and both of these did well.

In two of the cases in the table, the *contents of the tumour were discharged through the lungs*, this termination in one case being followed by restoration to health, and in the other by death. The operation in the first of these (No. 19) was done on the 3d of April, and on the 21st, the tumour began to increase, and was evidently suppurating. On the 29th, six or eight ounces of bloody pus were brought up during a paroxysm of coughing, and the tumour suddenly diminished to one-half its size. This latter was punctured, and five ounces of the same kind of matter was discharged, to the great relief of the patient. A cavity could now be distinctly felt between the 1st and 2d ribs at their sternal ends, through which the fluid had passed into the lungs, and there being a free communication, the air passed into the sac whenever he coughed, which distended it, and sometimes escaped by the external opening. The discharge from the outer opening gradually lessened, and at the end of three weeks ceased. His cough slowly wore off, and ninety-two days after the operation the patient was quite well.

In the second of these interesting cases, (No. 63) the operation was done by our countryman Dr. Gross, on the 18th of February. After its performance, the contents of the tumour became solidified, and its volume progressively diminished. On the 15th of March, the patient suffered from fever, and a slight degree of tenderness on the apex of the tumour was observed. On the 16th, he was suddenly seized with intense pain in the chest, which was particularly severe at the base of the right lung, and extended up towards the axilla. The respiration throughout the right lung was bronchial, and there was dullness on percussion over the lower ribs; the aneurismal tumour had suddenly disappeared at the time of the attack. On the 18th, the patient experienced a sensation as if a fluid was passing from the pleuritic cavity into that of the aneurismal tumour, and, upon auscultation, a plashing sound was heard at every inspiration, the noise resembling that produced by shaking water in a closed vessel. On the 20th, he died. Upon dissection, the aneurismal tumour was found to communicate by an aperture, one inch and three quarters in length by an inch and a half in width, with the pleuritic cavity; it was situated between the first and second ribs, and was obviously the result of ulcerative absorption induced by pressure of the tumour. Both ribs were denuded of their periosteum. The right side of the chest contained nearly three quarts of bloody serum, intermixed with laminated clots, and flakes of lymph, the former of which had evidently been lodged originally in the aneurismal sac.

The discharge of the contents of a subclavian or axillary aneurism into the lung is a rare termination of it, and, in connection with the two

cases given, it may be well to notice one somewhat similar, which has been recorded by M. Neret, of Nancy. The patient, aged 38, was admitted into the hospital St. Charles for hæmoptysis, and was found to labour under an aneurism of the left subclavian, of the size of a large chestnut, which had existed about eight months. He died a short time after his admission, and on dissection, the aneurism was found communicating with a cavity in the upper part of the lung, of the size of a new-born infant. A case of a similar kind is related in his work on the arteries by Mr. Guthrie.

*Cause of death.*—Of the sixty-nine cases, thirty-three, or nearly one-half died. Of these, two died from sloughing of the tumour; nine, from hemorrhage coming on at various periods between the fourth and thirty-third days; five from inflammation within the chest; six, from mortification of the extremity; one, from effusion on the brain; one, from exhaustion; one, from inflammation; three, from suppuration of the tumour; and in five cases the cause of death is not given.

*Mistakes in diagnosis.*—In two of the cases contained in the table, the aneurisms had been mistaken for abscesses, and punctured previous to the operation. In three other cases, malignant tumours about the shoulder were looked upon as aneurisms. The first of these cases (No. 31) was that of a female, aged eighteen, operated upon in the New Castle Infirmary, England. It proved to be a fungus hæmatodes. It became less in size after ligature of the vessel, but speedily assumed a serious aspect, and soon terminated her existence. The artery was found obliterated for at least one inch. In No. 43, the true nature of the affection was a medullary sarcoma of the upper part of the humerus. In the third of these cases, (No. 50,) the artery was taken up in April, 1835, and the aneurism supposed to be cured. On the 2d of July of the same year, the patient died of dropsy, and on dissection it became evident that no aneurism had ever existed. The tumour was of a dense structure and lying over the artery.

*Difficulties of the operation.*—These need not here be dwelt upon—every practical surgeon must be aware that at times they must be very great. Our only object at present is to call attention to the fact, that some of the most celebrated operators have failed in their efforts to pass a ligature around the subclavian. In a case at Guy's Hospital, Sir Astley Cooper attempted to tie the vessel above the clavicle. The aneurism was very large, and the clavicle thrust upwards by the tumour so as to make it impossible to pass a ligature under the artery without incurring the risk of including some of the nerves of the axillary plexus. The attempt was therefore abandoned. In a case of large aneurism of the right side, of four years' standing, which occurred to M. Dupuytren, in 1819, he succeeded, as he believed, after one hour and forty-eight minutes, in placing a ligature around the subclavian from above the clavicle. Pulsation in the tumour continued after the operation, which M. Dupuytren stated to have been the most tedious, difficult and painful that he had ever attempted, and after death, which occurred

on the ninth day, the ligature was found knotted loosely on that portion of the fourth cervical, which afterwards becomes the external cutaneous or musculo-cutaneous nerve, and the artery was not included in the ligature.

In the case of a soldier, aged 27, with hemorrhage from the arm-pit resulting from a wound received in a duel, Prof. Lallemand attempted without success to place a ligature upon the subclavian from above the clavicle. The hemorrhage was arrested by ligature of the wounded vessel, and he lived till the following day. In a case of aneurism which occurred to Mr. Cusack, of Dublin, he attempted to place a ligature on the subclavian in its third stage, and in endeavouring to pass it, the aneurism was penetrated. An alarming gush of blood followed, which was arrested by plugging up the wound: the man survived ten days, dying of hemorrhage.

In one case included in our table, (No. 16,) the sac was accidentally punctured by the needle in the attempt to pass it beneath the vessel, and gave rise to "terrific hemorrhage." Even after the ligature was secured, the bleeding was not checked till a sponge tent in the wound, and pressure, were applied.

In No. 11, (which, by the way, was the first successful operation for axillary aneurism in Great Britain,) the inferior nervous band, passing out to form the axillary plexus, was surrounded by the ligature instead of the artery: the mistake, however, was soon discovered; and the ligature, still retained, was used to pull the nerve a little upwards from its situation, so as to admit of the more ready exposure and deligation of the artery.

In cases of great difficulty of passing the ligature around the artery, it has been proposed by Mr. Hargrave and M. Cruveilhier, to saw through, or excise a portion of the clavicle—a procedure we should suppose which would greatly tend to increase the danger of the operation.

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ART. II.—*Account of an Epidemic Fever which occurred at North Boston, Erie county, N. Y., during the months of October and November,* 1843. By AUSTIN FLINT, M. D., of Buffalo, N. Y.

IN the autumn of 1843 an epidemic fever occurred at North Boston, in this county, distant about eighteen miles from this city. This little town, or rather settlement, is made up of some half-a-dozen houses, located closely together, and contains a population of forty-three persons. Of this number, twenty-eight were seized with fever between October 19th and December 7th. In ten instances the disease proved fatal.

It appears that some feuds existed in this small community; and the idea was conceived that a well from which the families who suffered were accustomed to draw water in common had been poisoned. Great excite-

ment consequently arose in the settlement and neighbourhood. Some of the sick being chargeable upon the county, the superintendents of the poor were desired to send a physician from the city to assist in investigating the nature and origin of the disease. I was employed for this purpose, and visited the place November 5th.

The disease was manifestly an epidemic fever, differing in several striking particulars from the form of fever which prevails in this region (mild remittent or bilious fever). This fact was apparent to the several practitioners in the neighbourhood whom I met on the occasion of my visit. It became, then, a question of much interest whether it was, in reality, our indigenous fever modified by some peculiar circumstances; or, whether it was to be regarded as a variety of the disease intrinsically different from our common remittent variety. If the former—inquiry would arise as to the circumstances which occasioned the modification; and if the latter were true, what were its proper nosological place and name? At all events, the fact of an epidemic fever attacking more than one-half the population of such a little community, in a healthy locality, and presenting a novel aspect, was sufficiently interesting and important to merit investigation.

I was able to devote only about eight hours to personal observations. During this time I made an autopsical examination of the body of a child who had died with the disease; and took notes at the bedside, of the history of nine cases, with the symptoms presented at the time of my visit. Dr. Camp, a highly esteemed practitioner in the neighbourhood, engaged to keep full records of the remainder of the cases, and to collect as many facts as possible which would have bearing on the investigation. Shortly afterwards, however, he was seized with a renewal of a pulmonary affection, to which he had previously been subject, confining him to his house, which he never again left. Tubercular disease became developed, and he lingered up to March last, when he died. Before being stricken down, he had written a brief history of ten cases, which he placed at my disposal.

The notes taken by myself, and those furnished by the late Dr. Camp, with such information as I have been able to collect from the other medical gentlemen, (Dr. Allen and Dr. Baker,) who were in attendance upon some of the patients, and whom I met in consultation, constitute the materials for an investigation of the character and origin of this epidemic visitation. They have lain by me until the present time, for want of leisure to arrange and write them out. I concluded to do so now, and submit them for publication, because the subjects involved, in addition to their local interest, appear to have, in a general scientific view, some importance. Any facts which may contribute to shed light on the etiology of fever, and the pathological distinctions existing among its various forms, must have interest and importance for those whose reflections have embraced these confessedly most obscure departments of medical research.

The first event to be noticed in an account of this epidemic, was the following, which preceded its appearance:—A young man from Warwick, Mass., on his journey to the west, arrived at Fuller's tavern (where the disease first appeared) Sept. 21st, stating that he was too ill to proceed further, and requesting lodgings until he should recover. He died on the 19th October. He was attended by a Thomsonian practitioner until within six days of his decease, when he was visited by Dr. Allen. It was ascertained that he had been unwell for several days before reaching North Boston, and that diarrhœa was one of the primary symptoms of his ailment. Dr. Allen states, in answer to my inquiry, whether his condition when he saw him resembled that of the cases which occurred afterward, that "he was labouring under the same form of fever that the other patients had, together with a malignant dysentery." He lapsed into that state usually denominated *typhoid*, as I was verbally informed at my visit, shortly after taking lodgings at Fuller's, and became progressively worse, until he died.

The first patient taken ill after the foregoing event, was a son of Fuller, aged sixteen years. He was attacked on the 14th October, 23 days after the arrival of the stranger. He complained first of pain in the loins, headache, chills. He had diarrhœa at the commencement. He was attended first by Dr. Allen, next by a Thomsonian, and afterward by Dr. Camp. He died Nov. 2d, (18 days.) Dr. Camp states, that he began to attend him 5 days before his death. Found him in a typhoid condition; tongue brown and dry; low muttering delirium; cough and copious expectoration of a muco-purulent character. Not much meteorism of intestines.

The preceding and the following cases are transcribed from notes made at my visit:

A daughter of Fuller, aged 15, was taken very shortly after the son was attacked, or about the same time. Dr. Camp saw her Oct. 29th, 15 days after the attack. Previously to this, she had had no medical attendance, excepting some cathartic prescription from a Thomsonian. The family had given two emetics and infusion of eupatorium freely. This patient has not had chills, but headache, pain in loins, &c. When Dr. C. first saw her, her symptoms were as follows: tongue moist and clean at edges, with a yellowish-white coat in centre, and not distinctly dry; pulse moderately accelerated; thinks there was no distinct exacerbation on that day, and he was present all day; skin was perspirable; no meteorism; some abdominal tenderness on pressure; bowels loose. I cannot ascertain that diarrhœa existed at commencement.

She has remained in a stationary condition up to the present time (Nov. 5th); been very dull and heavy in intellect, but no delirium during the day; much talking in sleep at night; has insisted upon being up and dressed every day, sitting up about one-third of the day; has been thirsty; been accustomed to go to the table and take some food, with regard to which no restraint appears to have been imposed; tongue, of late, more dry than formerly; has perspired of late daily more or less.

Another daughter of Fuller, aged 23, was taken ill on the 26th October.

Had been complaining of debility and general malaise for several days. On the 26th, symptoms were dizziness and headache, pain in loins, and mild diarrhœa. Took an emetic of eupatorium on the 26th. Was visited by a Thomsonian on the 27th. He gave some infusion to check diarrhœa. She had previously taken, of her own accord, cathartics several times. Dr. Camp visited her on the 29th inst. Then the tongue was dry and brown; marked tenderness over epigastrium, with burning sensation there, and moderate tenderness over abdomen; pulse much accelerated and small; skin dry; no perspirations; no distinct delirium, but some affection of intellect indicated by her imagining persons were speaking to her when they were not. About the 31st inst. began to perspire, and symptoms generally improved. Up to present date (Nov. 5th) been progressively improving. At time of writing these notes at the bedside, skin is quite perspirable; tongue moist, coated in some portions; pulse about 80; no appetite; says she gets tolerable sleep.

Another daughter, aged 3 years, was attacked on the 26th Oct. Had not appeared well for ten days previously. Two emetics had been given. Dr. Camp saw her on the 29th, but did not prescribe for two or three days. Tongue somewhat coated, white and moist; skin alternately dry and moist; daily exacerbations; diarrhœa was present in the early part of the disease, and has continued up to this date (Nov. 5th); no abdominal tenderness; moderate meteorism; some cough; thirst urgent; pulse is still rapid; tongue dry for the past few days.

A son of Fuller, aged 8 years. Began to complain on the 19th October. Was restless and feverish at night. Took cathartics, to which diarrhœa succeeded, which continued for ten days. Has had no medical attendance, but has taken eupatorium freely. Cough has been severe, and still continues. Has had perspirations for the last ten days. Appears now feeble, but appetite is good, and bowels regular. The only morbid symptoms are, debility and cough. Is dressed and about the house.

Two cases, in addition to the preceding, occurred in Fuller's family, which proved fatal. The dates of their occurrence, ages, symptoms, &c., I have not the means at hand for ascertaining. One of the preceding cases terminated fatally, but which I am unable to state. Seven cases occurred in this family, (not including the stranger,) and three deaths.

Evi, son of the same Fuller, but married, and living opposite, about four rods from the tavern, aged 21, was attacked Oct. 15th. Had been ailing for a week previous. At access of disease felt chilly, pains in loins, &c. Says he had no headache.

A Thomsonian practitioner saw him on the 16th. Had taken a cathartic a week previous. The Thomsonian who attended him states, that he had diarrhœa when he first saw him, which continued a week pretty severely. Intestines distended with flatus, and some tenderness over abdomen; also some pain in bowels; skin hot and dry; tongue dry, with yellowish coat at first, afterwards dark coloured; some sordes; intellect clear during the day-time, some muttering at night; skin, at times, has been perspirable through his illness; of late, more so, and to-day more than any other day. At time of taking these notes, pulse is much accelerated; skin moist; tongue moist, and thinly coated.

Treatment has been, six emetics, cathartics several times, and astringents. This is the 20th day of the disease. This patient recovered.

The family of Van Hallow reside about eight rods distant from Fuller's. Two cases occurred in this family, both children. They were attended by a Thomsonian:

The first child attacked, aged 7 years, became ill Oct. 16th; for five days previous had not seemed to be well. Had diarrhœa at commencement of a mild character, no cathartics having been administered. Had chills and rigors with pains in bowels. When first seen by the Thomsonian he states that the pulse was very frequent; skin hot and dry; diarrhœa continued; abdomen meteorized; tongue dry and dark; some sordes; low muttering delirium has existed much of the time; picking of the bedclothes. About ten days after his attendance commenced, she began to perspire occasionally; delirium ceased; tongue improved; has had appetite; bowels are now regular; pulse enumerates 125; skin rather hot, and cheeks flushed. Has had cough, and free mucous expectoration.

Treatment similar to that of last patient. Recovery took place in this case.

The second child, aged 9 years, was attacked Oct. 23d. Been previously ailing for four days. Diarrhœa was severe, at commencement, before any medicine was given. Had chills and slight rigors. Diarrhœa continued for ten days. No perspirations; skin hot and dry; tongue has been dark and dry,—now is moist, and covered with a brown coat; had muttering delirium for one day only; cough and slight expectoration; has complained of pain in bowels and in head. Now pulse 85°. This patient recovered.

This concludes the notes of cases taken by myself at my visit. They were necessarily cursory, owing to restrictions of time. The autopsy occupied all the afternoon after my arrival, and I had only a short time in the evening to visit the patients then sick.

My object in giving these notes is to present, in as far as my materials will permit, facts appertaining to the history of the cases, to serve as data for the practical reader to form an opinion respecting the specific form of fever which existed. I shall now proceed to transcribe brief accounts of ten additional cases, which were furnished by the late Dr. Camp.

The family of Jacob Ingraham reside about three rods from Fuller's tavern. In this family were seven cases, two ending fatally. Dr. Camp recorded an account of four of these cases.

Miel, aged 7 years. Attacked about the middle of October with pains in the head, stomach and back; fever, thirst, slight nausea, &c. Treated by a Thomsonian until the 30th inst., when I first saw him. Symptoms then—delirium; great restlessness; hot dry skin; scanty high-coloured urine; costiveness; tenderness of abdomen, with slight tympanitis; tongue brown and dry, with sordes on lips and teeth; constant moaning; pulse small, frequent, somewhat tense; some spasmodic action of muscles (subsultus); great exhaustion; patient did not speak; cough, with tough mucous expectoration.

31*st*. Symptoms same. Bowels evacuated with ol. ricini, which procured a quantity of hard fecal matter.

*Nov.* 2*d*. Constant moaning; tongue still dry, brown coat; skin hot. Has had blister to back of neck. No stool since 31st ult. Ordered infusion of spigelia in conjunction with small doses of calomel and Dover's powder.

3*d*. Symptoms same. Calomel grs. x, and ol. ricini ℥ss, evacuated the bowels and brought away a dozen large worms.

5*th*. Appears better; slight appetite; no diarrhœa nor perspirations; pulse slower and softer; tongue clean, but still dry. Has not spoken a word since I first saw him.

8*th*. Perspiration occurred; appetite continues; pulse regular, but feeble; continues restless and moaning; bowels costive.

11*th*. Swelling near left ear, and a number of boils on different parts of the body.

14*th*. Punctured abscess near the ear, and evacuated a teaspoonful of good pus. Is slowly convalescing; but has not spoken a word since I first saw him. This patient recovered.

Isaac, aged 9 years. Attacked about the same time, (middle of October,) and treated by the same Thomsonian until the 30th October, when I first saw and took charge of the case. Symptoms of attack similar to preceding case. When I saw him there were the same general restlessness and moaning; slight cough; quick pulse; tongue dry in centre, but moist at edges; perspiration copious upon the face, but nowhere else; some appetite; some stupor; but no delirium.

*Nov.* 3*d*. Tympanitis. No evacuations from bowels without laxatives. Sweat continues, and covers the body. Treatment has been tonic.

5*th*. Skin perspirable; tongue moist; less appetite; slight delirium, with restlessness and moaning.

8*th*. Skin, tongue and appetite as before. Delirium increased, but not active. Some red spots on face and arms, which disappeared in a few moments, probably caused by irritation.

14*th*. Improving; rests better; delirium ceased; appetite good; recovered.

Lucy, aged 5 years. Attacked on the 28th October. Had been complaining for three or four days previously. Symptoms were headache, chills, frequent pulse, drowsiness, diarrhœa before taking any medicine. Dr. Baker administered an emetic of ipecac. on the 30th, and followed it with a cathartic of calomel at night.

31*st*. Tongue dry; skin hot and dry during the febrile stage, but there were evident and very marked remissions, accompanied by free perspirations; slight tenderness of abdomen; no tympanitis. Febrile symptoms continued with rapid prostration until the 9th Nov., when death took place. No opportunity for post-mortem examination.

Narcissa, (an adult, but age not given,) attacked, October 29th, with slight pain in the head. Expected to have been married on that day, had the family not been sick.

31*st*. Violent pain in head and back, with fever; coated tongue; great thirst; slight delirium; stupor with talking in sleep; diarrhœa succeeding a cathartic which she took on the 30th.

*Nov.* 2*d.* Skin hot and dry; suppressed urine; tongue dry and coated; great stupor; thirst. The diarrhœa was suppressed by an anodyne enema.

4*th.* Tongue somewhat moist; skin still dry; respiration short and difficult; slight tympanitis; dry and hard cough.

7*th.* Skin became perspirable yesterday, and so continues. Fever has exhibited distinct paroxysms, with marked remissions. Feet have been cold.

9*th.* Delirium increased, with more restlessness, and less stupor; tongue dry; skin dry in paroxysms, then perspirable during remission; cough and difficulty of breathing increased.

12*th.* About the same. Delirium continues.

13*th.* More stupor; great prostration; death in the evening. No post-mortem examination.

Polly (age not stated) was attacked Nov. 8th. Had complained for a week previous of lassitude, pain in stomach, nausea, loss of appetite, slight diarrhœa.

On the 8th, slight chills occurred; tongue dry, with a light coat; diarrhœa increased; pain in head, back and limbs; increased pain in stomach and bowels; tympanitis. Had drank freely of "white lye" during the previous week, and taken a dose of cathartic pills. Skin dry.

Blistered the abdomen, prescribed diaphoretics and mercurial alteratives on the 9th.

14*th.* Diarrhœa has ceased; respiration laborious; tongue brown, dry and swollen; countenance haggard; muttering delirium; great thirst; sharp, quick pulse; prostration. Treatment, stimulant and diaphoretic—quinine, carb. ammoniæ, camphor, &c.

The notes of this case terminate here. The patient recovered.

The family of Hallick reside about ten rods from Fuller's. Seven cases occurred in this family, of which five proved fatal.

Dr. Camp recorded notes of but two cases.

Hannah, aged 16. Attacked October 28th. Had diarrhœa for several days; headache, pain in back, with chills, &c. Pulse accelerated; tongue dry, with brown coat; sordes, &c.; cough, with mucous expectoration; delirium early, but cannot state on what day. Fever remitting, alternating with perspirations.

Treated by Dr. Allen, with calomel, Dover's powder, blisters, fœtid gums; and in the last stage, carb. ammonia. Death occurred on the 9th Nov. No examination.

Abigail, aged 14. Attacked about the 8th November. First complained of great lassitude and prostration. Tympanitis existed several days before she was taken down. Diarrhœa was present. Pulse at time of attack was quick; skin dry; tongue dry, swollen and brown; slight remissions of fever on some days, and fever not as active as some of the other cases. She continued for several days with no material alteration, gradually sinking until the night of the 14th, when she died.

There was an ineffectual effort made in this case to produce ptyalism in the first instance; and the subsequent treatment consisted of tonics and stimulants. Diarrhœa constantly attended; and no perspirations occurred.

Slight pulmonary affection existed; and almost constant delirium for the last three days.

The family of Dobbs resides about three rods from Fuller's. Four cases occurred in this family, without any deaths.

Dr. Camp's notes embrace an account of three of the cases.

Adeline, aged one year. First saw this patient on the 29th October. Could get no satisfactory history of the previous symptoms. Had been sick about two weeks, and been treated by a Thomsonian. Found her with frequent, small pulse; dry, hot skin; tenderness of epigastrium; costiveness; dry and furred tongue; sordes on teeth and lips; sore mouth and fauces; scanty urine; picking bed-clothes, and constant sliding towards foot of bed; thirst; restlessness; no tympanitis; no eruption; cough; hurried respiration; dilated pupils. Treatment: mucilaginous drinks; blister to back of neck; cathartic of rhei and sodæ; ext. stramonium every four hours; lotion of cold vinegar and water to head; frequent ablutions of body with mild suds

*30th.* Rhei had procured two evacuations of offensive fecal matter. Blister vesicated well; pulse less frequent, with more fullness; thirst diminished; skin softer.

*Nov. 1st.* Continues better. Directed infusion of ipecac., cardamom and rud. liquorice, and continued the ext. stramonium.

*3d.* Perspiration occurred for the first time yesterday; point and edges of tongue begin to clean; picking bed-clothes ceased; pulse less frequent.

*4th.* Crust from tongue and lips come off; perspiration continues; no diarrhœa; bowels moved by enema.

*8th.* No fever; bowels costive; tongue becoming clean; some appetite.

*14th.* Tongue clean; good appetite; strength returns slowly; cough has increased since the 8th. This patient recovered.

Sarah, aged 9 years. Attacked Nov. 1st with chills, pain in head, back and limbs; diarrhœa; tympanitis; slight abdominal tenderness; pulse accelerated; slight cough; moist, furred tongue; hot, dry skin. She took 20 grs. calomel, with 1½ opii, at night, which proved cathartic on the next morning.

*Nov. 2d.* She drank freely of infusion of ipecac., cardamom and rud. liquorice, which produced copious perspiration. On the 3d inst. she was running about the house.

Hannah, aged 11. Attacked on the 8th Nov. with violent pain in head; furred tongue; slight diarrhœa; slight chills; pulse somewhat accelerated; some tympanitis without abdominal tenderness; heat of skin. Dr. Baker attended until the 14th inst., when I saw her again. Tympanitis had then subsided; diarrhœa ceased; tongue somewhat swollen, dry in centre, and covered with a dark-brown fur; pulse still frequent; fever remits daily, and perspiration occurs; no delirium. This patient recovered.

This concludes the notes furnished by Dr. Camp. Of the remaining ten cases, (the majority of which were fatal cases,) I only know from verbal communication with the attending physicians, that, in their general features they resembled closely those of which some account was recorded. Had Dr. Camp's health permitted, the records furnished by him would have been much more complete, as well as more numerous.

The following is the record of the appearances, found at the autopsy which I performed at my visit. The record was made at the time by Dr. Rogers, of this city, then my pupil.

The subject was a child, aged (as near as my recollection serves) about 12 years.

Autopsy eighteen hours after death; chest was first examined. No effusion into pleural or pericardial cavities. Lower lobe of right lung presented dark colour; and minute spots of purulent-looking matter followed incisions. No tubercles or granulations. Lower lobe of left lung also presented minute points of purulent matter, confined to inferior portion of lobe.

Heart. Right ventricle contained small portion of coagulated lymph; left ventricle, some fluid blood. Appearance of both ventricles natural. In the right auricle there were some lymph and some bloody liquid.

Liver. Somewhat enlarged, and portions presented a marbled appearance. Aspect on incision healthy. Gall-bladder somewhat distended.

Stomach. Internal surface presented no traces of inflammation, nor lesions of any kind.

Intestines. Upper portions empty; colon somewhat distended with gas. Several invaginations (progressive) were discovered: One, 4 inches from duodenum, an inch and a half, easily withdrawn; a second, same length and character, along the ileum; a third, do., three and a half inches in length; a fourth, do., one and a half inches; a fifth, do., one inch; a sixth, do., three and a half inches. Mesentery of lower ileum reddened; mesenteric glands enlarged; the range nearest the intestine about the size of peas; some of those nearest spine nearly as large as a hickory-nut, one quite as large. On pressing the larger glands after incision, portions of dark bloody points were produced. Mucous membrane of superior portion of small intestine covered with a yellowish matter; the inferior portion was thickly covered with a greenish-yellow matter of the consistence of jelly.

An ulceration of the size of a shilling piece was discovered about six inches above the cœcum; fourteen other ulcerations found along the lower third of the ileum. The upper ulcerations were of an oval form. Above the ulcerations the elliptical patches were thickened. The ulcerations corresponded with the enlarged mesenteric glands.

Upper third of intestine presented healthy appearance.

Pancreas healthy.

Spleen, (by some oversight which I am at a loss to account for,) is not mentioned, and its condition is not recollected.

Brain. Vessels of dura mater not injected. Slight opacity of arachnoid. Veins, interiorly, not distended; posteriorly, moderately so. On removing brain from cranium, about an ounce of serum remained in the latter, probably escaped from the ventricles. Very small quantity of serum in left ventricle; none in the right. Sections of either hemisphere presented natural appearance: also, sections of cerebellum.

I have thus presented all the facts relating to the history of the cases which I was able to obtain as data for an investigation of the character of the disease. Although the reports of the cases are incomplete, they suffice to show that the fever presented an association of symptoms distinguishing it from the common bilious remittent form, which prevails in this region.

The testimony of the physicians, who saw nearly all of the cases, and were able to watch the disease throughout its course, may be added to the evidence of the facts which have been presented. They all considered the cases as peculiar, and quite different from those usually observed in that locality and the adjoining towns, over which their practice extended. The question now recurs, if not our usual form of fever, what were its type and appropriate nosological name? It appears to me very clearly to have been the form of fever which usually prevails in the New England states and in France, which has of late years excited so much attention, especially among the French pathologists, and which has been called, after Louis, *Typhoid* fever, or the *typhoid affection.*

The following are the considerations upon which this opinion is based: First, of the symptoms.

Diarrhœa was a prominent symptom in nearly all of the cases of which I have any account. Excluding two cases, in which information on this point is defective, of the remaining fifteen, fourteen exhibited it; and in most of the cases it attended the commencement of the disease. It is worthy of remark, that in the single excepted case meteorism was present. The latter symptom was also present in a large proportion of the cases. These phenomena are highly characteristic of typhoid, and comparatively unfrequent in remittent fever.

Delirium of the low muttering character, or a modification of the intellect more or less approximating to this, was present in a larger proportion of cases than accords with our observation of the remittents of this region.

So, also, of pulmonary affection, as indicated by cough and expectoration. In the majority of the cases this is mentioned as a prominent feature. This complication is as frequent in typhoid fever as it is unfrequent in remittents.

The same holds good, also, with regard to headache and the presence of sordes.

On the other hand, the characteristic symptoms of the remittent form of fever were absent.

The disease came on with a gradual access, instead of attacking suddenly, as is the case generally in remittent fever.

Although chills, and sometimes rigors attended its accession, it does not appear that these were so pronounced and severe as in remittent fever. Nothing is said of their returning with that observance of periodicity which we know is very frequent at the early period of this disease.

Nausea and vomiting, which are eminently characteristic of remittent fever, (which, with the green-coloured discharges from the stomach, have given rise to the very general application of the term *bilious* to designate this class of fevers,) do not appear to have been prominent in a single case of those which were recorded.

It would serve to confirm the diagnosis, if the presence of the eruption

peculiar to typhoid fever, had been clearly ascertained. I could not learn at my visit that any rose spots had been observed; and as it was evening when I visited the patients, it would probably have been difficult, if not impracticable, to determine upon their presence. As to the fact of my looking for them I do not recollect. I only recollect making the inquiry, particularly of Dr. Camp, with whom I visited the patients. Dr. Baker has since stated to me, that he observed an eruption over the chest and abdomen in several of the cases. He did not look for it, and did not consider it important, but his attention was incidentally directed to the fact. He says that they resembled flea-bites, but were about half the size, and slightly elevated. He does not recollect at what stage of the disease this was noticed, but thinks toward the latter part.

Although if these were cases of typhoid fever, the eruption ought to have been present in a large proportion of the cases; yet the fact that their existence is not rendered certain, through the observations of the physicians who attended, is not to be regarded as proof that the eruption was not present. The spots being few in number, and located on the chest and abdomen, might easily escape the attention of those who did not appreciate the importance of seeking for them. Typhoid fever is not a modern disease, yet the fact of its being characterized by the presence of an eruption, has been discovered only recently.

These cases were, also, free from periodical remissions to a much greater degree than would have been expected in the same number of cases of the ordinary form of fever in this locality; while, on the other hand, the remissions which did occur were not more frequent or marked than is common in typhoid fever. This fact particularly excited the attention of the medical gentlemen who attended the cases.

Dr. Allen, in answer to my inquiry as to his opinion of the character of the fever, states, that he regarded it as a remittent fever, but the remissions were very irregular and "attended with putrid or typhoid symptoms." I may state here, that this gentleman is of opinion that the disease was modified by the use of water from the suspected well. Of this I shall speak presently.

The results of the autopsy (which, unfortunately, was limited to a single case) go to sustain the opinion which has been advanced. Indeed, these alone, in the minds of many pathologists, would, probably, be considered sufficient to establish the position.

But there are other circumstances not less cogent than those which have been submitted.

(*a*) The disease occurred at a season which, if the disease had been remittent fever, would have been very unusual. All the cases transpired between Oct. 19th and Dec. 7th. Remittent fever, it is well known, rarely occurs so late in autumn as the date of the first case; while, on the other

hand, typhoid fever exhibits a preference for the very period in which these cases did occur.

(*b*) Remittent fever shows no decided respect for age in the choice of patients. Typhoid fever seldom seizes upon an individual over thirty. The eldest of the subjects of this epidemic was not over 23. A good proportion were children.

(*c*) Remittent fever very frequently in its course or termination becomes converted into intermittent fever. Out of twenty-eight cases of remittent fever, according to our experience, it would be quite incredible that this conversion should not take place in a single instance; yet with regard to these cases this was the fact.

(*d*) According to our observations it would, also, be equally incredible, that out of eighteen cases of true remittent fever, after the expiration of more than eighteen months, intermittent fever should not have been developed in a single instance. Yet this is, also, true with regard to those who survived the disease under consideration.

These considerations collectively appear to my mind to establish, by irrefragable evidence, the correctness of the opinion that the disease in question was *not* our common remittent or bilious fever, but *was* the typhoid fever of New England. I pass now to consider the etiology or origin of the epidemic.

North Boston is situated about twelve miles from the lake shore, at a considerable elevation above the level of the lake. I am not prepared to describe the circumstances appertaining to its topography in detail, nor is it necessary to the present purpose. There are no paludal grounds at or near its location. The medical gentlemen named, have stated that it is as healthful a locality as any in the county. Intermittent fever has not been known there for many years. Cases of our common remittent fever have occasionally occurred before and since the epidemic, but not to a greater degree than in other portions of the same neighbourhood. What, then, was the source from which emanated the *materies morbi* of this epidemic; which, when the ratio of those seized with the number of the population is considered, and, also, the ratio of mortality, must, certainly, be considered as an extraordinary epidemic, both in the extent of its prevalence, and in its malignancy? My reflections on this department of the subject have led to the opinion, that the disease was imported from New England by the stranger who came into the place and died there twenty-three days before the first case occurred—after which the other cases followed in quick succession.

The fact of the contagiousness of typhoid fever has been a subject of much discussion and discrepancy of doctrine both here and abroad. Formerly denied, it is now acknowledged by Louis, who is especially distinguished for his researches into the history of this disease. He affirms, that the importation of the disease is often the origin of an epidemic,

and that an isolated case may be the cause of its prevalence. This opinion has received the sanction of other eminent observers; still, it is perhaps not generally received. In fact, the existence of a contagious principle, or a striking difference in this respect, is made to constitute one of the most prominent points of distinction between the two forms of fever alleged to be distinct, viz., Typhoid and Typhus. The question of etiology, in this instance, is, then, one of much interest and importance.

It may be remarked, in the first place, that no circumstances were discoverable, apart from the one mentioned, to which the disease could fairly be attributed. It must be confessed, however, that this negative fact is possessed of little weight abstractedly, since, from our ignorance of the remote causes of typhoid fever, it is probably difficult to trace its origin (apart from contagion) under any circumstances. But the fact that this fever has never, to my knowledge, been before observed, at least in an epidemic form, in this region, must certainly be regarded as giving peculiar force to the supposition that it was received by importation. This consideration, to my mind, renders the occurrence of the epidemic under consideration particularly interesting and important.

Was the disease, of which the young man who came to Fuller's died, typhoid fever? It is unfortunate that he was attended for the first fortnight by a Thomsonian, so that the symptoms were not observed by a competent physician from the first; and that an autopsy was not performed. Yet, under these disadvantages, I think there can be little doubt as to the identity of the disease with that of the other patients.

Dr. Allen, who does not explain the diffusion of the disease by means of contagion, states, in answer to my inquiry as to its identity, that "when I saw him, six days before he died, he was labouring under the same form of fever that the other patients had, together with a malignant dysentery. I learned from his friends that he was taken while on the road with diarrhœa, but not very severe, and after arriving at North Boston he grew worse continually." I was informed verbally by Dr. Allen, and by Dr. Camp, (who also saw him,) that when he came under their observation he was in that condition usually called typhoid, with low muttering delirium, sordes, &c.

Rev. Preserved Smith, of Warwick, Mass., in a letter in which he obligingly communicated answers to several inquiries relative to the subject, states that the young man left home a few days before he arrived at North Boston; that he had been "rather bilious" during the summer, but was as well as usual when starting on his journey. He states, farther, that during the November following his departure, (while the subsequent cases were in progress at North Boston,) there were a few cases of a mild, slow fever in the town of Warwick, but none in the immediate section in which the young man resided. The fever was, probably, the common autumnal fever of New England; in other words, typhoid fever.

The fact may be worthy of mention in this connection, that the father and a brother of this young man, the following spring, died of erysipelas, of which disease there were several cases in the town at the same time, but proving fatal in these two cases only.

These are all the facts bearing on the question of the origin of the epidemic which I have been able to obtain. Not to prolong the discussion, I will only repeat, that it appears to my mind, in view of all the circumstances, to be the most rational and consistent conclusion, that the young man left home with the germinal principle of typhoid fever in his system; that this principle was developed by the fatigue and exposure incident to his journey; that the disease derived from the latter circumstance a greater severity, and perhaps, also, an increased communicability; and that the subsequent cases of fever were due to contagion or infection thus introduced into a community closely congregated, and having free intercourse with each other.

It may not be improper to add, that in arriving at this conclusion I have not followed any bias of prepossession for the doctrine of contagion. I make this statement because it is sometimes easy (and alas! too common), to select facts, and give them a direction to make them apparently conform to sustain a preconceived opinion. I had formed no opinion before contemplating the facts with regard to the subject under consideration; and I have endeavoured to present the facts in this memoir precisely as they have presented themselves to my own mind.

I cannot avoid the apprehension, that this article will be deemed extended to a degree not commensurate with the interest and importance of the matter which it contains. The questions, however, involved, relate to points which have, of late years, been much discussed, and it is highly desirable that they should be settled by the collection of facts upon a definite and firm basis. The questions alluded to are, *first*, as to the radical distinction between the forms of fever called remittent and typhoid; *second*, the propagation of the latter by contagion or infection. The relations which the epidemic at North Boston appear to have towards these questions of scientific interest and importance will, I trust, excuse the space which it has been necessary to occupy, in order to present a fair exhibition of the data upon which were based the conclusions submitted.

The writer desires to add, that in arriving at the conclusion that the fever under consideration was typhoid fever, he does not wish to be considered as expressing any opinion with reference to the propriety of instituting a radical distinction between the so-called *typhoid* and *typhus* fevers. The phenomena were those which are described as appertaining to the former rather than to the latter; but whether the two are to be regarded as distinct forms of fever, or only modifications of the same form, are questions wholly extrinsic to the present subject.

It remains, in conclusion, to notice the belief which was current in the

settlement and neighbourhood where this epidemic occurred, that the public well had been poisoned, and that the disease was due to this source. I have not considered this as involved in the subject of the etiology, because, assuming the fact that some poisonous substance had been introduced into the well, the results would have been of a definite, specific character, due to the particular modification of the poisonous substance employed, which would be capable of being appreciated. We have no grounds for the supposition that any poisonous substance capable of being introduced into water, would produce an epidemic fever of any type.

I was supplied with a jug of the water from the suspected well, portions of which I submitted to two competent practical chemists, Dr. Raymond and Dr. Hayes, of this city. It was carefully analyzed by each of these gentlemen, and no traces of any poisonous agent were discovered. On the other hand, it was found to be remarkably pure, the only foreign substance found in much abundance being saccharine matter, which was accounted for by the fact that the vessel in which it was brought to the city had been a molasses jug!

When the result of the analysis of the water was communicated to the people of North Boston, they became fully impressed with the belief, that the same evil-disposed persons whom they suspected of poisoning the well, had contrived to remove from the jug the poisoned water, and substitute pure water in its place. If the matter had any real or important connection with the etiology of the disease, it would be proper to investigate the correctness of this suspicion, but, under existing circumstances, it seems quite unnecessary to enter upon any discussion respecting it.

Buffalo, *April*, 1845.

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Art. III.—*Observations on Uterine Hemorrhage.* By Paul Spooner, M. D., of New Bedford, Mass. (Read before the New Bedford Medical Association, Feb. 18th, 1845.)

Gentlemen:—Having met with an unusual number of cases of flooding within the two years past, I have thought that I might be able to offer something on this subject that would be as interesting and useful as any from the writings of others, or from the volume of my own experience of nearly forty years, which you are aware has not been very limited in obstetric practice.

Flooding is one of the most alarming events that occur in labour or at an advanced stage of pregnancy, and is attended with such eminent risk to both mother and child, that it ever must be a source of extreme anxiety to

the medical attendant, and summon all his skill; and however well prepared he may be by reading and reflection, he yet may meet with cases that will put all the resources of art at defiance, and he can only stand and witness the fatal progress of the fell destroyer with every beating pulse.

Floodings that occur in pregnancy, or during labour, are of two kinds, proceeding from different causes, arising from the situation of the placenta. Dr. Rigby calls them "the accidental and the unavoidable." The accidental, arises from a partial separation of the placenta, when in its natural situation, or of the decidua from the uterus; the unavoidable, from the placenta being wholly or in part attached to the os uteri.

The accidental is sometimes attended with severe pain in the part where the separation takes place; from the effusion of blood between the placenta and uterus. Albinus relates a case, in which the separation was complete, excepting at the margin of the placenta. They are said sometimes to be so large, as to induce faintness and great prostration of strength without any appearance of blood escaping. The separation sometimes is very small, but is sufficiently large to endanger the patient's life: in such cases the flooding is apparent.

In the early stages of pregnancy, a rupture of the decidua may be attended with almost as much danger as a separation of the placenta, in consequence of the size and number of its blood-vessels, and is supposed to be a frequent cause of abortion, by not keeping up that gradual and equal distension with the uterus, and thereby becomes stretched and torn. In the advanced stage of pregnancy it becomes less vascular and thin. I once met with a case at the full period of gestation, in which the decidua was very much thickened, and caused the membranes to adhere to the uterus throughout its whole extent. This patient had been afflicted with a good deal of pain about the abdomen, and some fever, with soreness of the mouth, and emaciation for several weeks before her confinement, resembling puerperal sore-mouth. Her labour was easy and natural. After waiting the usual time after the birth of the child for the uterus to contract, I took hold of the navel string, and pulled it gently for some time; it suddenly seemed to give way, and with the placenta came the uterus inverted, with the placenta attached. The placenta was attached to the fundus. I insinuated my fingers between the placenta and uterus, and commenced separating them and the membranes from the whole internal surface of the uterus, except the orifice which had naturally been torn. I then grasped the uterus firmly in my hand, and carried it upward, gently rotating it until it passed through. I let my hand remain in the uterus for some time to induce it to contract. This patient recovered, and had one child afterwards.

The causes of accidental hemorrhage, besides those already enumerated, may be: falls, blows, straining at stools, over-fatigue, lifting great weights,

excessive laughter, fright, general plethora, and a varicose state of the veins of the umbilicus.

The symptoms which usually attend accidental hemorrhage at first, are: slight pain or uneasiness in the back and bowels, and more or less discharge of blood, which increases until fainting is induced, sometimes without pain. If pregnancy is pretty far advanced, labour-pains may come on, increasing gradually until it is accomplished; each pain will arrest the hemorrhage, if it is accidental, and return again after the pain, which will distinguish it from the unavoidable. It is of the utmost importance to ascertain the kinds of hemorrhage your patient is labouring under; it can always be done by an examination, unless the os uteri should be out of reach—a circumstance to be kept in mind—or so little dilated, that you cannot feel its contents. If the hemorrhage has been considerable, we shall generally, in the advanced stage of pregnancy, find the os uteri soft and yielding, the membranes smooth and uniform to the touch.

The treatment must depend on the stage of pregnancy in which flooding takes place. If in the early stage, it will generally be sufficient to confine the patient to a hard bed; and keep the mind quiet and tranquil, and the bowels open, and the body lightly covered with bed-clothes, and cloths wrung out of any cold liquid, as rum, or vinegar, and water, or ice, may be applied to the abdomen, and vulva, if the case is urgent. Of all the remedies for arresting uterine hemorrhage, the acetate of lead and opium stand pre-eminent. I have more confidence in them than any or all other internal remedies. Dr. Rush first discovered and made known to the world the wonderful effects of lead in arresting uterine hemorrhage. It may be given in doses of two or three grains of acetate to half a grain of opium every two or three hours. I have rarely met with a case that required more than two or three doses to arrest it. Dr. Dewees says, "it may be given in doses of from three to ten grs. of acetate, every half hour until its object is attained." He says, "he has not only found it safe, but necessary in such quantities. It will be best to premise a bleeding, if the pulse is full or the patient of a plethoric habit, and in the first stage of pregnancy." He says, "he has met with some cases where the sugar of lead had no effect when given by the mouth, but where it has produced an almost instantaneous effect when a scruple of the lead to a gill of cold water, and one drachm of tinct. of opium has been thrown up as an enema." In uterine hemorrhage, the tampon holds a conspicuous place as a remedy by most of our best writers; but its use, I think, is confined exclusively to those cases where flooding occurs in the two or three last months of pregnancy, or during labour, and the pains insufficient; and it acts entirely, I say, from the law of irritation, which law the uterus is obedient to, in an eminent degree, when in an impregnated state. What but this causes the uterus to act after you have ruptured the membranes, and let the water escape, and the ovum becomes as it were a foreign body? Then the uterus will begin

to act, and throw it off, and will call to its aid the muscles of the abdomen and diaphragm, till its object is accomplished. You will also find the same law prevailing whenever there is an effusion of blood into it, so as to increase its volume.

Mrs. B. was taken Nov. 7, 1844, at 4 A. M. At 8 A. M. I was called; found she had just entered her seventh month with her second child. The pains were so considerable that it appeared necessary to make an examination; found the membranes protruding nearly even with the os externum; they were very thin, and ruptured by the slightest touch: the fluid discharged was blood and water; this I did not know until my evening visit; the quantity was very great; the pains ceased entirely. I passed my hand high up; could just reach the os uteri so as to ascertain its condition, and found it natural. I saw her several times during the day; she had no pain since the membranes were ruptured. I was called at 7 P. M.; her pains returned. After I had been in the room an hour or more, observed her to gape between her pains, which had become considerable; examined her pulse; found it was feeble; she said she was faint; on inquiry, found she had been shedding blood all day, after the membranes were ruptured—a circumstance I was ignorant of before; made an examination, found the orifice dilated to the size of a crown piece, soft, and dilatable; assisted it with every pain until I was able to ascertain the part presenting; found it was the breast, with the arms up by the side of the head; I had brought one down into the vagina before I could determine this point. I gave the ergot, before I could satisfy myself as to the presentation, which some doubtless will think rash; but the prostration of strength my patient was labouring under, and the feeble efforts the uterus was making to relieve itself, appeared to me to justify the act; it being in this early period of pregnancy, I knew there was no chance of saving the life of the child, and that delivery must be effected as soon as practicable. I sent for Dr. Reed and my instruments. On his examining the case, we agreed to first attempt to introduce the blunt hook, and get hold of one of the lower limbs; if we should fail in that, then to open the chest, and remove its contents and deliver. I had previously attempted to introduce my hand and turn the child, but found the resistance so great that I did not think it practicable. I now passed the hook up till it came in contact with the thigh, caught it, and brought it down, then pulling it, the position of the child was soon changed; the arm receding as the breach advanced, and after a few pains the child came; the placenta came soon, and we had the satisfaction of leaving the patient a few hours after as comfortable as could be expected under such circumstances; she recovered rapidly. There was a rupture of a varicose vein of the umbilicus. The tampon needs to be applied with much care. I prefer pledgets of lint, or the common raw cotton dipped in good vinegar, and carried carefully up to the os uteri in such quantities as you can conveniently introduce until the vagina and os

externum is completely filled, and then apply the T bandage. If the case is urgent, I would take a seat by the side of the bed, and press my hand firmly and steadily on the tampon until the pressure of the tampon on the orifice of the uterus brings on pain and arrests the hemorrhage. I have never been able to apply the tampon so as to arrest hemorrhage by plugging as is supposed; nor have I ever known it to do so unless it excited pains. I have been called to a number of cases in which it had been tried before I saw them.

Ergot is another invaluable remedy in floodings, particularly in those cases where you wish to excite uterine action, and arrest hemorrhage; it sometimes fails of producing this effect, particularly if there has been no disposition to labour-pains before it was administered. And if given, and it produces its specific effect, and that effect passes off, I think it may be established as a fact, that you cannot give it in any quantity that will bring on pains again. It may be given in decoction, made from ℥ ʒ of the ergot to 1½ gills of boiling water; one-third to be given every twenty minutes until it excites its peculiar action.

In abortions that happen in the second or third months of pregnancy, the placenta is frequently retained and causes great flooding, so as to endanger the life of the patient if not arrested. In such cases, I often find a dose of ergot timely administered to produce the happiest effect, where the sugar of lead had failed. I have met with a number of cases, in which all these remedies have not arrested the flooding. I then make an examination, and frequently find a portion of the placenta at the os uteri, and endeavour to bring it away. If it be so far out of reach that you can only break down a portion of it, you may feel a degree of confidence that your patient is safe. I have never known hemorrhage to continue after this has been effected.

The mode which has been recommended, and one that I have of late years pursued, is to place the woman on her left side; and to have an instrument made of a fine piece of wire, a foot in length, with a handle at one end and a curve at the other, about three-fourths of an inch broad, flattened, so as to give it more power to hold on, or break down the placenta when applied to it—a simple instrument certainly, but one that, I think, will be found to be easier of application, and equally as safe as the placenta forceps, that have lately come into use. I introduce my left hand into the vagina, having the instrument in my right, carry it upwards into the os uteri till I can grasp a portion of the placenta, my finger on one side and the instrument on the other. I then bring them together, and repeat it until I break down a portion of it. Now, whether the irritation produced by this operation on the uterus causes it to contract and arrest the hemorrhage, or the breaking down a portion of the placenta, I am not yet prepared to say, as I think I shall adduce further evidence to question the commonly received opinion on this point.

Mrs. D., in her fourth pregnancy, about 30 years old, was taken in labour December 9th, 1844; supposed herself to be in her eighth month. A short time before I was called she had aborted; the fœtus was very putrid; said that she had discharges for some time; they were so offensive that they were almost insupportable to herself. The child could not have been more than four months when it perished. I was called at 11 A.M.; cut the navel string, and proceeded to remove the placenta; it soon came in a very putrid state. She said she did not believe I had got all, for she was as large as before. I put my hand on her abdomen, and felt another child; but it was entirely out of reach per vaginam. She flowed more than I had any reason to expect in such a case; gave her 4 grs. acetat. plumb. with very little effect and no pains; gave the ergot. I waited till 4 P.M., and introduced the tampon; the pains then gradually increased until I thought the uterine action sufficiently established; then removed it, found the membranes protruding into the os uteri so as to arrest the hemorrhage; pains increasing, the membranes soon burst with an unusual quantity of water; the child presented with the breech, as I at first supposed; as it advanced, I discovered it to be the left scapula and arm; the cleft between I had mistaken for the breech. She was lying on her right side. I prepared myself, and gradually intruding my left hand in the absence of pain, carried it upward with much difficulty until I caught the left femur, and brought it down, so that I was able to reach the other, the child turned readily, and was soon delivered.

If hemorrhage in the advanced stage of pregnancy is not arrested, by means already suggested, and the pulse grow feeble and quick, face pale and bleached, attended with restlessness and tossing about the limbs, it then becomes necessary to rupture the membranes and deliver. The os uteri will, generally, be found soft and yielding to gentle dilatation, and must be persisted in until the regular uterine action is established so as to arrest the hemorrhage, or is sufficiently dilated to use the forceps, if the head presents, or turn the child, or open the head; if the urgency of the case demand it, the patient must be supported by stimulants.

We come now to the consideration of unavoidable hemorrhage. This arises from one cause alone, and that is, the attachment of the placenta more or less completely over the os uteri; it sometimes is attached to one side, with its edge lapping over the orifice; and at others, it is equally attached to the whole internal orifice of the uterus, sealing it up, as it were, hermetically.

That this is the situation and condition of the uterus in such cases, I presume I shall be sustained by the recollections of several gentlemen present who have been witnesses of the fact. In one case, after the os uteri was sufficiently moulded out for the child to pass, the placenta that was completely over the orifice at the beginning had receded nearly out of reach of the finger, in consequence of the remaining portion retaining its

original attachment to the uterus; it is a circumstance of great importance in the diagnosis of this formidable freak of nature.

"The placenta was occasionally found at the os uteri in the days of Guillemeau, Mauriceau, Daventer, Pugh and others. They believed it had been separated from its original situation, and fallen down. Paul Portal first spoke of it as adhering to the os uteri, and the necessity of delivery by art. Smellie, Gifford, and others seem to be aware that such cases did sometimes occur." But it appears that the subject was but imperfectly understood even in Europe until the publication of Dr. Rigby's essay on "Uterine Hemorrhage" in 1775.

Hemorrhage seldom occurs before the sixth month in placenta presentations; from that time until the full period of gestation it is very liable to occur. I wish to impress on your minds one point, and that is, the condition of the os uteri in such cases. We know, in ordinary cases, the uterus, in the two or three last months of pregnancy, becomes thinner at its neck or lower part, and enlarged, and permits the descent of the child; and this is what women call the settling down of the child. Now, when the placenta is attached to the os uteri on all sides, it prevents that moulding out of it, in the last months, which takes place in common; in consequence of that firm adhesion and support which the placenta gives the uterus, we shall always find it higher up, and, in many cases, out of reach on examination. After the sixth month, and sometimes later, nature begins to bring about this process of dilatation, and in doing it some portion of the placenta must be separated, and flooding ensues, which may be repeated several times without exciting much alarm till, by its repetition, fainting ensues. If the blood finds passage outwardly, it will be without pain; but if the separation does not extend to the os uteri, so as to permit it to escape, you will find your patient attacked with pain, which will go on increasing with the accumulation until, by their force, a further separation will be produced, and the blood find a way to escape, and then the pains may cease.

Mrs. R., 40 years old, a very strong muscular woman, weighing 180 lbs., was taken in pain June 4th, 1842, three or four hours before I saw her at 1 P. M.; had become so severe before my arrival, that one of the attendants met me at the door, urging me to hurry, saying the child would soon be born. I prepared myself, and on taking my seat, a violent pain came on, and there was a sudden gush of something that I supposed to be water, but soon found it was blood; the pains then entirely left her. On examination, found the pelvis broad and spacious, but the os uteri, and, in fact, the whole body of the uterus, entirely out of reach, a circumstance new to me at this time, it being the first case of the kind I had met with. In this case there was evidently a separation of a portion of the placenta from the uterus, but this separation did not extend to the orifice of the uterus and permit the blood to escape: here you see an exemplification of law, before alluded to; as soon as the distending power was removed the

pains ceased and could not be excited again. I used the acetat. plumb. freely without effect, and cold applications. I had no faith in plugging from what I had seen of its effects, and sustained in this opinion by some writers. Nature not making any effort to deliver, I then sent for Dr. Read and my instruments. His views corresponding with my own in the case, we concluded to wait a little and see if the pains would not return; but finding they did not, it became necessary to deliver. I introduced my hand, and passed it up between the placenta and uterus, and ruptured the membranes; some little pains followed this operation, but not enough to accomplish the object; we then gave the ergot, in large doses, with very little effect. I then commenced dilating the os uteri until I could get at the head, and opened it, and with great difficulty succeeded in delivering; but nature was so far exhausted that she died in four or five hours after. After the termination of this case, I regretted that I had not used the tampon, and thought if another occurred I would not omit it.

We all know the wonderful provision nature makes in such cases with animals in the two or three last months going with their young. The mare and cow, for instance: at this period we find the fat, that is deposited about the hips and parts concerned in parturition, to be gradually absorbed; no matter how sleek and fat they may be, it will be taken up here, so as to resemble the poorest animals; (and is what farmers call, "falling in about the hips;") nor is she less provident in her wonderful care for woman ordinarily. But in these cases, nature seems to have become recreant to her usual sanative provisions, and art here must come in and aid and support her in her devious way.

Mrs. H., 28 years old, not more than four feet four inches in height, of a very nervous temperament, in her eighth month with her fifth child, was taken in labour December 6th, 1844. I was called at 2 A. M. on the 7th; did not think the pains enough to render it necessary to make an examination; the pains, as she expressed it, seemed to work up into her stomach, instead of downward; remained with her during the night; had an engagement out of town that day, which I could not dispense with; told her so, and that I would make an examination, and if there was a prospect of her getting through in time enough for me to fulfil my engagement I would. On making examination, found the os uteri nearly out of reach; its orifice firm and entirely closed. Seeing there was no prospect of the labour being terminated seasonably for me, after giving her 10 grs. Dover's powder, I left her at 5 A. M. At 4 P. M., the pains having continued with little remission, she was taken with flooding, for the first time. They sent for Dr. S. Bartlett. He found her flowing profusely with fainting. On examination, found the placenta attached to the os uteri. He sent for Dr. Whitridge. The pains were considerable, and had brought the head down, so they thought the labour would soon be ended. After a pretty good pain, the head receded suddenly entirely out of reach. She now

became very faint and almost pulseless at the wrist. They sent for me at 6 P. M., and on my arrival gave the foregoing history. We, of course, presumed there must be a rupture of the uterus; they wished me to make an examination. Found I could just reach the head with my finger; on consultation, thought best to deliver, thinking she might be able to bear it. We sent for instruments; and I was to endeavour to dilate the orifice, so that we might be able to open the head. I commenced dilating with every pain, and soon found the head descending quite rapidly until it passed through the os externum; the child was dead. The mother remained very feeble and fainting for several hours; she took a full dose of tinct. opii and other stimulants; reaction came on, and continued for a few days: she finally recovered. In this case, the pains were not sufficient to separate the placenta from the uterus until 24 hours after she was taken in labour, or a little before Dr. Bartlett was called. Now, did the action of the uterus, after making an ineffectual attempt to expel it through its orifice, become inverted and push it towards the fundus? These questions I must leave to abler and more experienced minds to determine. Dr. Whitridge was assisting her at the time when the child receded, and could not have been deceived; he is a gentleman of great professional experience.

In the treatment of unavoidable hemorrhage, we should ever bear in mind the infinite moral responsibility resting upon us. Here are two immortal beings, whose lives are, as it were, in our hands, and there is very little time to be spent in temporizing. The life of the mother should never be left in jeopardy for the sake of the child. If the flooding is not great, and there has been but little loss of blood, try the acetate of lead and opium, by the mouth, as before suggested. If the flooding is considerable, make an examination. If you find the uterus almost out of reach, and its orifice rigid and firm, and little, if at all, dilated and without pain, you then may be sure you have a case of no trifling nature to deal with, and prepare to act accordingly. What is to be done? Use the tampon as already described, not with the view of plugging up the vagina, as is generally supposed. You might as well think of plugging up the mouth of the Mississippi with a bale of cotton that grows on its bank. Look at the muscular structure of the vagina and uterus, and its wonderful capacity to be moulded out in any and all directions almost that nature or art may attempt.

Dr. Ramsbotham tells us he has taken away more than a hat crown full of blood after the delivery of the child in such a case; and that the effusion is sometimes so great as to give rise to the suspicion, that the woman was going to have two or three children had it not come on so suddenly. Use the tampon. I say give ergot; imitate nature in her kindlier moods, when she wishes to relieve the womb of its superincumbent road, and presses the smooth and delicate membranes, with their

accumulated waters, into its orifice, that it may yield to the stimulus of distension. This idea has been suggested incidentally by others, but not insisted on. They view it commonly acting as a plug, stopping up the vagina until a coagulum is formed; I use it as an irritant alone, to be applied to the os uteri when high up and out of reach, where manipulation, which is better, sometimes is impossible, and where there is no effort of nature to bring on uterine action.

If these means fail to excite uterine action and arrest hemorrhage, then remove the tampon and gently insinuate the hand between the placenta and uterus, and dilate the orifice as soon as it can be done, and rupture the membranes, and deliver, either with the forceps or turn the child; or open its head, and then bring it away: all which operations you already understand, and it would be useless to describe them. Never perform the operation in too exhausted a state of your patient, lest she die in your hands, but give cordials and stimulants, and endeavour to recruit the vital powers before you operate.

Mrs. E., 33 years old, and in her eleventh pregnancy, had aborted five or six times in the early stages of pregnancy; of light complexion, thin skin, and a very vascular system; always flooding tremendously at these times, as much so as when she went to the full period of gestation. She had got into her eighth month, but had been shedding at times for the last six months, so much as to confine her to her bed almost the whole time, and required frequently the acetate and opium to arrest it.

*June* 13*th*, 1844, at 1 A.M., was taken with flooding. I was called at 2. I gave her the acetate alone, hoping that labour would come on and relieve her from her unpleasant situation. She was a lady of great firmness and self-possession, and had endured all these restraints with a martyr's zeal. I saw her frequently during the day; the medicine seemed to keep the hemorrhage at bay, but without pains. When I left for the night, I directed them if the pains came on, or the flooding returned, to let me know it. At 1 A.M., I was called; found her flooding, with slight pain; made an examination; found the orifice little, if at all dilated, presenting a firm, hard, unyielding mass, very unusual to the touch. I then commenced plugging. She was a good deal exhausted from the discharge. I was aware of the trouble that awaited us, and sent for Drs. Read and Whitridge. They came. For a time it seemed checked; after a while we found it was not; the pains had increased. We gave the ergot in large quantities, and thought it best to deliver. On removing the tampon, I was struck with the improvement, by the descent of the uterus and the partial dilatation of its mouth. After removing the last portion of the tampon, which had been applied with great care, and retained firmly in its situation by the bandage, I then introduced my hand, insinuated it between the uterus and placenta, so as to rupture the membranes and let the waters escape. This had little effect in increasing the pains; flooding still continuing, it was deemed best to proceed and deliver,

and was accordingly done, by dilating the os uteri, and then opening the head. She suffered very much from the operation, and the great loss of blood she had sustained, caused her to sink rapidly, in spite of the appliances that art could suggest; and at half-past 9 A. M. her eyes were closed by death.

Dr. Collins, late of the Dublin Lying-in Hospital, in his sixteen thousand, six hundred and fifty-four cases, met with only eleven of unavoidable hemorrhage; and it does not appear that he used the tampon in any case. It, however, does not lessen my views of its utility in certain cases.

I have been addressing you, gentlemen, with great imperfection, I am aware, on one of the most interesting subjects that you will ever be called on to treat, interesting from its moral and social relations. It is an accident that less frequently occurs in first pregnancies than afterward. Here is a mother, and child, and she, perhaps, one whom many call by that all-endearing name, *mother.*

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ART. IV.—*On Rheumatism of the Uterus and the Ovaria.* By ISAAC E. TAYLOR, M. D., of New York. (Read before the Pathological Society of New York, March 12th, 1845.)

To the Germans particularly do we owe the credit of having called the attention of the profession to this form of disease, and especially are we indebted to Wiegand, of Hamburgh, who first published his essay in 1803, ("*Von der Ursachen und der Behandlung, die nachgelurtszo-gerungen,*") and followed by Carus, Schidtmuller, Haase, Welten, Siebold, Busch, Joerg, and Moser. According to Busch, Alphonse Le Roi and Chambon speak of it, but they have given very little consideration to the subject—and, on further investigation, an English physician in London, G. Charlton, gave to the profession, an Essay entitled "*Inquisitio de Causis Catameniarum et uteri Rheumatismo,*" published in 1685. The French had adduced nothing on the subject, till the essay of M. Salathé, a pupil of M. Stoltz, of Strasburgh, was published in 1837, followed by the Bibliographical Researches of M. Dezeimeris (in *L'Expérience Journal de Med. et de Chirurgie,* 1839, for May and June). M. Caseaux has, (in his *Traité theoretique et pratique de l'Art des Accouchemens,*) he says, borrowed from these two essays, and remarks "that this malady is still unknown to the French nosologists; and this section of his treatise is copied entire into the translation of Colombat d'Isère, by Dr. C. D. Meigs, Philadelphia, published lately. Respecting rheumatism of the ovaries, it is incidentally mentioned by Kruger and Murat; it is also referred to by Cherau in his *Mémoires*

*pour servir a l'étude des Maladies des Ovaries*, and a case has been given by Copland in his *Dictionary of Practical Medicine*, which I have appended to my cases. With these few prefatory remarks, I shall proceed to the relation of the cases, the object being of a practical nature, and which I hope may not be considered as so much time misspent and unprofitable.

Case I. In the spring of 1842, I was requested to visit Mrs. S. A., multipara, aged 30, whom I found sitting in a rocking chair, with her hands grasping the arms of it, her limbs extended, and her body fixed in position so as to give her the appearance of her being in actual labour; she was, after the contractions had passed off, in a moderate degree of perspiration. The paroxysms were of a severe character, and continued from 10 to 15 minutes at a time, and had commenced nearly two hours previous to my visit. The countenance was anxious, the abdomen tender on pressure; and when the uterus was under the paroxysm, it was exceedingly hard, and firmly contracted;—she insisted that from her own sensation, the child must be, or could not be far from being, born, and that she was unable to be moved to her bed. Having her, under such circumstances, placed as properly as I could, an examination, per vaginam, was made, which was with great difficulty accomplished; but instead of finding the os uteri dilated and the child low down, the former was discovered as long as at the 7th month, and the external orifice not more dilated than ordinary at this period—also high up and a short distance from the sacrum. The pulse 84—skin moist, thirst moderate; and there was frequent inclination to pass urine, with a disposition to diarrhœa.

The only cause to which the patient could attribute this attack, was her having exposed herself to the privy the preceding day, which she had not been accustomed to do, and presumes the commencement of the attack took place from that time, as, on that day, towards evening, she had had severe paroxysms, though of short duration, and which left her after she had become warm in bed.

In this lady the paroxysms continued during the whole day, and nearly the whole of the evening; when she was found in a profuse perspiration, and the paroxysms had ceased; she was subject to these attacks till the completion of her full term, and they continued sometimes with great severity; but by the remedies that were administered, they were after a time subdued. The treatment adopted in this case, was Dover's powder every two hours, in 10 grain doses for 3 doses, and emp. belladonna to the abdomen.

The usual remedies did not succeed in preventing the return of the disease, whilst the Dover's powder, after its full effect had been produced, always succeeded in its object.

The labour of this lady was not so severe as her former labours had been, but after the uterus was dilated to its fullest extent, (though the labour continued during a day and a half,) the child had not made any

progress further than applying itself to the oblique diameter of the pelvis, when the ergot was given, and in half an hour the child was expelled. There appeared to be before the ergot was given, an inability in the uterus to act with sufficient power to expel the child, and that such was the case, seems to be shown by the happy effect of the ergot in bringing the fœtus in a few minutes through the whole cavity of the pelvis.

I would further remark, that I attended this lady this winter during a short attack, and which she said she could compare to nothing but actual labour; in this instance she had slight fever, dry skin, thirst, and frequent inclination to pass urine, coming on in paroxysms, and ceasing after the second day, by a free discharge of leucorrhœa, though she was not pregnant, and had not had leucorrhœa before for many months.

Case II. April 4th, 1844, 4 P.M., I was requested to visit Mrs. McG., primipara, aged 23, who was supposed to have all the symptoms of being shortly delivered, though but 5 months advanced in gestation. I found the patient laying upon her back, and complaining very much of the excessive pain she was suffering, which came on in paroxysms, and which lasted fully 5 minutes. The countenance expressive of much pain; the abdomen tender to the touch; the uterus hard and contracted; the skin natural, and the pulse 88. The pains were of an expulsive character. An internal examination discovered the neck of the uterus very hard and firm, the os uteri closed, and exceedingly sensitive, and covered with a number of follicular glands enlarged to the size of a pea, the uterus, during the contractions, appearing to force itself completely into the cavity of the pelvis. The remissions in this case were not of long duration. The treatment pursued was warm fomentations to the abdomen, and Dover's powder, 10 grains every 3 hours, and after two doses and the frequent application of the fomentations, the paroxysm left her, and she slept well during the evening; though there was some soreness continued afterwards. The paroxysm, in this instance, commenced at 12 o'clock, A.M., and ceased at 1 o'clock, P.M.

April 5, 6½ P.M.—The patient's husband came in great haste, saying she was expected to be confined every moment, and would probably be delivered before I could reach her. When I arrived, her screams were very loud from the severity of the pains which she was suffering. The countenance was anxious; the abdomen could not bear to be touched, even with the slightest pressure; the uterus strongly contracted; and I was informed that the pain had continued half an hour, having a true expulsive character. Both the patient and her friends were persuaded that the child must be shortly delivered; skin rather dry; pulse quick; tongue furred; belly slightly tympanitic; she was unable to move, and remained all the time on her back; there had been no discharge of the waters; no hemorrhage; and the paroxysms had continued from 3 o'clock, and lasted till 9 o'clock that

evening. An examination, per toucher, discovered the neck of the uterus hard; os uteri closed, but excessively tender to the touch, and the fœtus could be distinctly felt pressing on the anterior portion of the uterus and against the pubis; after the contraction, the uterus would assume its natural soft and pliable feel. The treatment adopted this time, was 12 leeches to the abdomen, emollient poultices, and Dover's powder, 8 grains every hour till 11 o'clock, P. M., at which time she was much easier, being in a perspiration, and had not had a paroxysm for two hours. This patient continued free from a return of the disease till 1 o'clock, P. M., next day, when slight paroxysms were felt, and a Dover's powder given, which quieted the pains, and she continued comfortable till the 7th instant, when she had a renewal of the pains, which were mild at first, but gradually became so severe as to need my attendance at 9½ P. M.; and when I saw her, firm contractions had occurred, and the pulse slightly accelerated; skin not very dry; abdomen tender, and talking incoherently at intervals. Tart. emetic ¼ gr. was given every three hours; she was not seen till 12½ the next day, when she was laying perfectly quiet on her back, and looking vacantly, with natural pulse; the contractions had ceased. Tart. ant. grs. iv. ordered every two hours. At 4½ P. M., I was sent for in great haste, saying she was dying, but I did not see her till 6 o'clock, when she had passed into a state of stupor, lying on her back, with limbs extended; no stertorous breathing; pupils dilated, and eyes fixed; pupils do not move by the light; the upper lip tumid; totally insensible. At this stage of the attack, as Dr. Boyd was not far distant, visiting a patient, I sent to him, requesting that he might visit the case with me, which he kindly did, and advised the continuance of the tart. antimony and the application of cold to the head. Venesection had been premised. 11½ P. M., the same.

April 8th, at 5 A. M., she spoke, for the first time, which she had not done for 20 hours. The bowels were moved at this time freely, and there was slight return of the paroxysms of the uterus; slight tenderness on pressure. After this attack she experienced but one more till the completion of her delivery, which I did not attend her in, being absent from the city, and which took place in August.

Case III. Through the kindness of Dr. Henschel, I have been favoured with the annexed case, which occurred in the unimpregnated state after a miscarriage.

Mrs. H., 24 years old, multipara, had a miscarriage during the second month, and lost more than the average quantity of blood. Eight days afterwards, she exposed herself to a privy, and the next day she had great bearing down, and a frequent desire to pass urine, which she did under excessive pains, and very little at a time; the urine looked of a dirty brown colour, and left a reddish sediment at the bottom of the vessel. Great pain

above the symphysis pubis; pressure of the hand insupportable; the pains are greatest during the evening and night, having a remission towards morning; pulse ranges from 100 to 120 in the evening, and in the morning 80 to 85, a little hard; the skin moist, except in the lower part of the abdomen, which is hot and dry. When the exacerbation comes on it is accompanied by severe headache and thirst. There is no discharge from the vagina, and the uterus feels hot and tender. The pain is much increased by coughing, sneezing, and, even by talking, and sometimes as strong as neuralgia. The 3d or 4th day of the attack she had syncope several times, caused by turning in the bed, and cannot lay on any other part but the back, and is unwilling and unable to be moved.

The treatment in this case was antiphlogistic, under which she gradually recovered; at the same time a profuse fluor albus appeared, which had been habitual with her prior to pregnancy.

Case IV. This case of rheumatism of the ovaries has been transcribed from Copland's Dictionary, and is adduced as an evidence that the uterus is not alone subject to rheumatism. It is one which resulted from metastasis.

Mrs. P., of —— street, Walworth, was attacked 15th July, 1821, with most excruciating rheumatic pains in the loins and limbs, increased on the slightest motion, or on attempts to turn in bed. She was in a profuse perspiration, and her pulse full and about 100. She attributed the attack to sleeping in a damp bed when traveling. She was about 26 years of age, strong, plethoric, and of the sanguine temperament. The catemenia were usually very abundant, and seldom at longer intervals than 14 days. Their occurrence was, therefore, soon expected. She had never been pregnant. About 3 days after the commencement of the rheumatic attack, and whilst I was attending her, she suddenly experienced an attack of most acute pain in the hypogastrium a little above each groin; soon afterwards two tumours could be distinctly felt in the regions of the ovaria. They were extremely painful and tender upon pressure. The pains in the limbs were greatly abated, but pain was still complained of in the loins; all the symptoms continued. Bowels costive; urine scanty and high coloured, with frequent micturition; countenance flushed, excited, animated; temper variable and hysterical. Treatment antiphlogistic, and four or five days after the attack, the catamenia came on, and the pain, tenderness and swelling gradually disappeared from the hypogastrium.

*Remarks.*—The question that, I presume, will propound itself to many of the profession is, are these cases of rheumatism of the uterus, or are they cases that are more nearly allied to neuralgia of the uterus, hysteritis, or false pains? Respecting the latter point, which would appear to be the most prominent in the investigation, I grant that a mistake might be made and

entertained, and it will be my chief endeavour to elicit as much information as the circumstances of the case will admit, that no false opinions may have been imbibed or even a wish to inculcate them. Much difficulty would appear to present itself in the clear elucidation of the diagnosis between them, but I trust sufficient evidence will be given, to remove all difficulty on the subject. I cannot conceive why it should appear strange, that rheumatism should attack the uterus and the ovaries, when we have evidence that the abdominal muscles, the intestines, according to the Germans, and the tunica albuginia of the testes, according to McLeod, the larynx and the pharynx, have been affected, coming on suddenly, accompanied by an increased degree of heat, great tenderness to the touch, and withal tumefaction; the symptoms shifting and disappearing as suddenly as they made their appearance, and just in the same manner as we observe rheumatism changing from one joint to another, and further, having the heat of skin and pulse bearing a relation to each other—the heat being moderate and the skin soft. It might be asserted that the case of Mrs. McG., which was through metastasis, (as she had been accustomed to have muscular rheumatism,) might not be sufficiently clear, conceiving that metastasis does not take place in muscular rheumatism, but is more properly associated with rheumatism where the synovial membranes are affected; this, however, may be in perfect unison with the meaning of the term metastasis, as being chiefly applicable to tissues of the same character and function, and can be fully sustained by the solution given by Bichat of "affinity of tissues," or by McLeod, of extension of the malady; which I suppose are sufficiently satisfactory proofs that rheumatism may attack the uterus through affinity of tissues. A further point of interest in the case of Mrs. McG., is the sympathetic affection of the brain during the attack, which resembled, in many points, the cases where the brain has been suspected to be engaged when the disease has been located in the pericardium; for it will be noticed that in those cases, simulating disease of the brain where the pericardium had been involved, the brain has only been sympathetically affected, and are not allied to those cases where a metastasis has resulted when the synovial membranes were affected, for in all these cases the patients have died of inflammation of the brain. In all the cases related, with the exception of Mrs. McG.'s, which was thorough metastasis, or affinity of tissues, the principal agent was cold; and I think it may with truth be asserted, that all those causes that form the development of rheumatismal affections, especially atmospherical vicissitudes, metastasis and hereditary disposition, may develop the disease; Wigand and Busch have added, "that as the disease is more frequent during the last months of gestation, it is owing to the exceedingly expanded and attenuated state in which the abdominal muscles are, the peculiar formation of the abdomen protruding the clothes of the females, and permitting more air to pass up to the genital organs." In the case related of Dr. Henschel, and one of my own, the

attack followed a visit to the privy. Such is the frequency of this disease in Germany sometimes, that Welten, in Rust's *Magazin für die gesammte Heilkunde*, remarks that a catarrho-rheumatismal constitution predisposes to it, and that he has seen it epidemic. No fixed period has been noticed when rheumatism may attack the uterus during pregnancy, as the cases will show; it is, however, more especially towards the latter months and the completion of gestation that it occurs, and it will be noticed that the unimpregnated uterus does not escape. It occurs also during labour and in the puerperal state, exhibiting itself upon any portion of the uterus, but more particularly confined to the whole of the organ and its appendages; and, according to Wigand, Moser, Carus, Joerg and Busch, it has its *seat* in the *muscular* fibres and their sheaths; it shows itself without any premonitory symptoms, and suddenly, as in like affections of the heart, or presents the precursory symptoms of headache, giddiness, general irritability, with pains occurring in different parts of the body, before exhibiting itself upon the uterus, accompanied with symptoms of fever. The paroxysms are of short duration, only two or three in a day for one day, or for two or three days, and returning no more; or they assume a state of steady irregular contraction during the whole day, and continue, as in the case of Mrs. S., for two months. In its most aggravated character it is attended with fever, hot and dry skin, thirst, quick and tense or full pulse, great tenderness of the abdomen on pressure, the patient laying upon her back and unable and unwilling to be moved, retaining her position during the whole of the attack, fearing if she should move during the remission, the act of moving will renew the paroxysms, and if she is moved, unwilling to resume her former position, the paroxysms being of so severe a nature, and expulsive in their character, as to induce the patient sometimes to believe the child will be delivered every moment; great anxiety of the countenance, and perspiration after each paroxysm, with either a free discharge of urine, or by profuse perspiration. The os uteri is particularly tender, so that the patient will cry out with the intense pain which the touch produces, and even more so than in some aggravated cases of irritable uterus. When the paroxysms have continued any length of time, the bladder and the rectum become engaged, and the usual symptoms incident to those organs show themselves, as in the last stage of labour. A point of some interest, which aggravates the malady, is the movement of the fœtus during the highly irritable and excited sensitive state of the uterus.

An internal examination during the first months of pregnancy, discovers the neck of the uterus, during the paroxysms, very hard, exceedingly tender, and *not dilated*, but in the last months, as it more usually attacks the patients, it may become dilated. Carus, in his Gynæcologia, asserts that it is always dilated, which is not sanctioned by Wigand, or Busch, and, as these cases will show, this is not the case unless the contractions have continued some time, when it certainly does become so, and

which I think is amply accounted for, from the neck of the uterus having undergone considerable expansion and shortening during the 7th and 8th months, so much so in some cases of multiparæ, that at the 8th month the finger can be admitted through the neck, and the head of the fœtus ascertained; after the contractions the uterus returns to its normal state, provided the disease is mitigated through the treatment adopted. In the cases where not much fever prevails, and where it commences suddenly, it may assume the appearance of natural labour, and by the physician be considered as such, and I have no doubt that some of the cases reported as prolonged gestation may have been of this character. Haase, of Dresden, in the *Gemeinsamme Deutsche Zeitschrift fur Geburtskunde*, bd. 4, remarks that it may retard the commencement of labour where the disease has before been severe. On this point I would instance the case of Mrs. T.....d, who had arrived, according to her mother's and her own calculation, at the completion of her full term, it being her first pregnancy, and had been in labour for 3 hours when I first saw her. It commenced with slight chilliness, and pains of some activity and severity, and appeared to be severe from the commencement of labour, though no discharge had taken place of blood or liquor amnii. On examination of the uterus, felt the neck high up, opened to the size of a sixpence, and near the sacrum, the abdomen tender to the touch, and the patient laying upon her side, and no willingness or disposition to change her position, as she insisted she felt the child coming down, and nearly born. Matters were permitted to pass on, and at 11 o'clock, P. M., the uterus could be felt opened to the size of a two shilling piece, the head of the child perceptible, and I was certainly under the expectation and belief that delivery would be accomplished by morning; under these circumstances, the labour, as I supposed, was permitted to take its course, and I retired to bed, expecting ere many hours passed, to be called to give her my attention; I was allowed to rest till 6 o'clock; when I awoke, on visiting my patient, I found her in a comfortable sleep, free from pain, and had been so for two hours as the nurse said, and her skin moist. I saw her during the day several times; no pains had supervened, and she passed three weeks further, when I was requested to visit her; she had been in labour for 3 or 4 hours, with regular and steady pains, and the os uteri dilated at this time only to the size of a shilling. M. Caseaux, in his treatise *De l'Art d'Accouchemens*, has remarked that he has seen the neck of the uterus dilated to a-half inch, and the membranes felt engaging, but after the paroxysm they have retired, and the uterus has closed, and the delivery has not taken place. Carus remarks the same, and Welten says that in a case of this kind, pregnant for the first time, and at the 5th month, when pains of labour had already supervened, and the orifice opened so as to admit the finger; the pains were arrested by the means employed, and the next day the uterus was closed, and had lost its sensibility, and the patient did well. Busch also testifies to the same in his

*Geburtskunde* and his *Geburtshutfliche klinik*. It would, therefore, be considered prudent and proper that we should discriminate these cases, and endeavour to allay the contractions, that the consequences of abortion and rheumatic labour may be averted, and we should not suppose because the neck is opened to the size even of a two shilling or four shilling piece, that either of these circumstances will ensue, and not only this is to be averted, but that inflammation may not set in, that convulsions may be prevented, and that, according to Busch, the contractile power of the uterus may not become impaired, by the tissue of the uterus becoming, from the long continuance of the disease, rigid, and the parenchyma harder, so that at the time of labour the uterus will be able to accomplish its normal contractions, and to complete the delivery without assistance either by the ergot or the forceps, and also at this critical period that hemorrhages may not take place, and the life of the female be placed in much jeopardy. Respecting the injury to the child, Joerg has remarked that it is not so deleterious as through inflammation of the uterus, and this, we think, may be true, as the child, in this affection, suffers only from the contractions with the liquor amnii intervening, whilst in inflammation the placenta is frequently attacked, becoming indurated and much altered; or the uterus in some cases becoming softened, and the child perishes. The termination of this disease cannot, therefore, be supposed to be so favourable as has been believed, unless the attacks have been of a mild character, and of short duration; for sometimes the most effective treatment may prove abortive, as in the case of Mrs. S., though the patient has gone to the full period. Should the case prove to be one of a severe nature, and the patient advanced to the completion of utero-gestation, and even continue during labour, all the terminations of the disease are to be feared, such as hemorrhages after delivery, artificial delivery, and the application of the forceps. Having passed in review the principal points relating to this disease, I shall as succinctly, and as clear as I possibly can, endeavour to draw the line of demarkation between this disease, and those more nearly allied to it, hysteritis, neuralgia, spurious pains, and natural labour.

Of all the diseases, muscular rheumatism is that which is most nearly allied to neuralgia; it is in effect purely painful, having its seat more or less superficial, and giving rise frequently to exacerbations or paroxysms. If we consider that both consist simply of pain—though varying somewhat in their similitudes in this respect—that they are produced by the same circumstances—that they frequently exist together in the same individual, and, above all, that they may be followed and replaced by each other in an evident manner—we should believe that the maladies were the same—and that the location of the disease was alone different. To the practitioner, they may be considered as the same, but to the pathologist they are essentially distinct affections. Neuralgia of the uterus being more generally periodical in its character, having a long remission, though sometimes the attack assumes

the form of paroxysms, and they are of longer duration—and may become continuous, without any fever, having an acute, lancinating character, and being more chiefly confined to certain points, such as the lumbar, iliac, hypogastric, inguinal, and, according to M. Bassereau, (*Essai sur le Neuralgie*, Thesis, 1840), fixed upon the side of the neck of the uterus where these points are the most conspicuous, the pains not of an expulsive nature —the patient able and willing to move—the abdomen not very tender to pressure except on these points, and over the uterus; the anxiety of countenance not so great; and after the paroxysm or paroxysms no perspiration or discharge of urine resulting. Hysteritis seldom comes on suddenly, and then not in paroxysms; there is always fever; hot and dry skin; thirst; the pain is continuous, and chiefly on the lower portion of the abdomen; the tenderness confined to this point, and, if severe, becoming more diffuse; and should the fever not be subdued, it may proceed to softening of the organ.

Spurious pains, it must be acknowledged, are of frequent occurrence among females during gestation, and they sometimes continue to harass the patient for days and weeks, antecedent to labour, and there is no question that they are frequently taken for genuine contractions; still, we conceive their distinctive characters are well marked, generally supervening during the night and terminating by morning, erratic in their nature, the pains being principally in the upper part of the back and loins; a want of regularity in their appearance; the intervals sometimes very long; the patient restless; able to move from place to place; not fixed in her position; and the pains seldom attacking the uterus, and should they do so, they occupy principally the circular fibres of the fundus; and Wigand (in his *Die Geburt des Menschen*, p. 197, vol. ii.) says, "when the pains thus attack the fundus they very seldom pass into the cervix and os uteri, and become genuine expulsive pains; there is a want of tenderness; no anxiety of countenance; and no perspiration generally after the pains; and an internal examination discovers the neck of the uterus not acted upon, soft and of its natural feel."

In natural and actual labour there is not much tenderness, except during the last stage of a severe labour; no anxiety of countenance; the patient is able to move in any direction except when the pain is in force, and which produces a low, moaning, suppressed cry, and not crying with its agony; the pains coming on regularly, commencing at the os uteri, and passing to the fundus, and in a few seconds gradually increasing in power till they have reached their acme, and then gradually subsiding; but the pains become more and more severe and longer, acquiring their highest degree of activity at the *last* stage of an expulsive and protrusive character, and not at the commencement, and results in the birth of the child, and the uterus returning upon itself, opposing itself to hemorrhages. Excessive and expulsive pains *never* coming on (the head may be ever so low in the pelvis),

so long as the os uteri is not fully dilated, (Wigand, p. 310, vol. ii.,) and even should expulsive pains come on when the head is pushed down deeply in the pelvis, even to the very outlet, and when the os uteri is but little dilated, and is protruded before it, even in such cases we never see the really painful and expulsive action ensue, but as soon as the os uteri (perhaps often much suffering), has retracted over the head, severe protrusive and expulsive pains take place.—*Ibid.*, vol. ii. p. 467.

Having now glanced at these different points, I shall present the principal points of diagnosis of rheumatism of the uterus, and its termination as differing from the preceding affections, taking place frequently suddenly in paroxysms of a severe acute character, soon becoming *expulsive*, of many minutes duration; not long remissions; and confined to the whole of the uterus, and seldom to the back; the contraction firm and hard, inducing the patient to scream out through her sufferings; the position of the patient upon her *back*, *unwilling* and *unable* to *move;* the slightest excitement of the uterus producing a sensation of pain; much tenderness of the abdomen and diffuse; great anxiety of countenance from the first; free perspiration after the pains, and when the disease is about ceasing, either terminating in a profuse perspiration, or the discharge of urine; and should the paroxysms become more severe and not pass off, and the disease continue, metritis may ensue with the usual train of symptoms, which may render the case exceedingly difficult and painful; or the disease by its long continuance may expose the uterus to irregular contractions, and be a cause of difficulty in the delivery; and after delivery, the contractions may be so incomplete, that the fibres, through the long duration of the disease, become harder and more rigid, losing their contractility and giving rise to hemorrhages.

The treatment pursued must be adapted to the nature of the case. Should it be of a mild character, cathartics should be given, followed by diaphoretics; and I have given the preference to the pulv. Doveri in ten or fifteen gr. doses every two or three hours, which is highly recommended by Joerg, with emollient applications to the abdomen, or the application afterwards of the emp. belladonna to the abdomen, or applied to the os uteri after the method of Madame Lachapelle.

Should the case be of a severe form, and inflammation dreaded, the antiphlogistic means are to be put in requisition, accompanied by diaphoretics and sedatives. Should inflammation ensue, the course of treatment for that disease is to be adopted. Should the attack result from affinity of tissue or metastasis, revulsives ought to be applied upon the point primitively affected; and should any particular circumstances occur during labour to interfere with its advancement, and the female appear in danger, we must resort to version, if the child is high up, and the uterus dilated sufficiently; or, if the child is low down, the forceps.

ART. V.—*Medical and Surgical Cases.* By GEO. C. BLACKMAN, M. D., Newburgh, Orange co., N. Y.

CASE I. *Extra-Uterine Fœtation.*—On the 19th February last, in company with my friend Dr. Schenck, of Fishkill, I visited a patient under his care, whose history, as related by Dr. S., was of great interest. Some 18 months before our visit, the patient, a coloured woman, æt. 35, had informed the doctor that she was pregnant, and about the 9th month of her pregnancy. She experienced most of the symptoms of incipient labour. These, however, were of short duration; and Dr. S. heard nothing more from the woman until about the 15th February of the present year, when his assistance was requested for the extraction of a *tape-worm*, which was protruding from the anus. After a close inspection of the parts, Dr. S., much perplexed as to the nature of the protruding mass, removed it with the scissors. Much to his surprise, it proved to be the foot and leg of a full-grown fœtus, which he had removed at the knee-joint. The thigh of the child was also without difficulty extracted. In a moment, the doctor recalled to mind the facts connected with the early history of the case as before related, and formed a correct diagnosis. The body of the child could be distinctly felt, lying across the abdomen; and although nature was making an effort to discharge it by the rectum, it was evident, from the appearance of the woman, that she must soon sink exhausted. The bowels were obstinately obstructed, and she was unable to retain any nourishment on her stomach. Knowing that Drs. McKnight, J. Augustine Smith and others, had operated on similar cases with success, we resolved, with the patient's consent, to lay open the abdomen, and, if possible, to extract the child. She was made fully to understand, that in her low condition, the operation offered but little encouragement; but small as it might be, we felt it our duty to give her the chance. She replied, that she knew if not soon relieved she must die; and she was ready to submit to any thing that would give her the *least* prospect of life. With the assistance of Dr. S., and my friend Dr. Paine, of Newburgh, I made an incision through the linea alba, which extended from a short distance below the umbilicus to the pubes. The protrusion of the intestines was prevented whilst I introduced my hand to examine the connections of the child. It was enveloped in a sac, through which a small incision was made. It proved to be highly vascular, and there followed a considerable discharge of blood. We were unanimously of opinion, that an incision of sufficient extent to remove the child, would place the life of the woman in immediate danger, and, much to our regret, were compelled to abandon the operation. The wound was closed, and an anodyne administered, the greater part of which was not rejected. Although the patient, as she her-

self remarked, suffered but little from its performance, she continued to sink rapidly, and died some 40 hours after the operation.

*Post-mortem.*—The wound was re-opened, and an incision carried to the sternum. All traces of the omentum had disappeared. The small intestines appeared unusually large, were agglutinated together, and adhered firmly at various points to the sac containing the child. From the transverse arch to the sigmoid flexure, the colon had become greatly diminished in size. On laying open the sac, which was about one-third of an inch in thickness, we found a full-grown fœtus in a very putrid condition. The fetor for some time was absolutely intolerable. At the sigmoid flexure of the colon, there was a large perforation, through which the leg of the child had been discharged. At several points, where the small intestines adhered to the sac, the process of ulceration had already commenced. Although the woman had borne several living children, the uterus was remarkably small and perfectly healthy. It adhered by the whole of its posterior surface to the sac, and no traces of the Fallopian tubes or ovaries could be discovered.

Case II. *Scirrhus of the Colon.*—On the 12th January, 1845, I was requested by Dr. Paine, of this village, to visit a gentleman, who for 48 hours had been labouring under all the symptoms of intestinal obstruction. The particulars of the case, for which I am indebted to Dr. P., are as follows:—The patient, æt. 35, about ten years since suffered from a severe attack of intermittent fever. From that period he has occasionally experienced a sensation of fullness and uneasiness in the left hypochondrium. For the last two or three years, he has also been affected with anal hemorrhage and a burning sensation in his stomach. Several weeks before the present attack I saw him with Dr. P., and, from the fullness in the region of the spleen, dullness on percussion, and after a careful examination of the thoracic organs, in which we could detect nothing abnormal, we arrived at the conclusion that he was labouring under a chronic congestion of that organ. He was freely cupped in the affected part, from which he derived considerable benefit. He still continued, however, to complain much of borborygmi, often observing, "that it seemed as if there were a volcano pent up within him." On the morning of the 12th, when I first saw him for his present difficulty, there was violent retching and vomiting, and the abdomen was tender and tense; pulse 125. Cathartics and enemata, judiciously administered by Dr. P., had produced no effect. He was freely cupped in the epigastric and left hypochondriac regions. Sinapisms were applied over the abdomen and the enemata repeated.

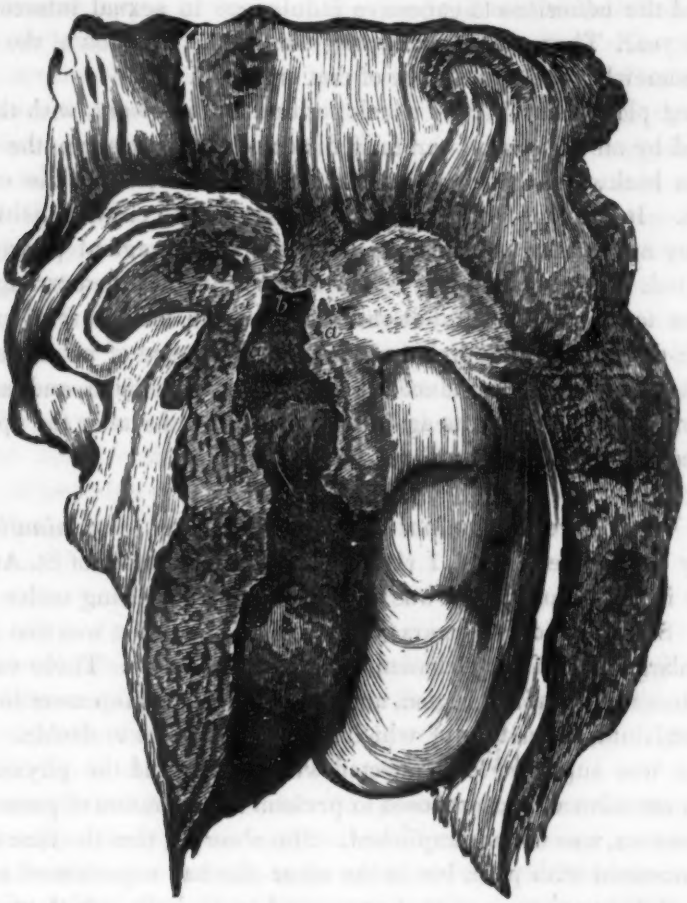
*Jan. 13th.* No change for the better. Inability to retain any thing on his stomach. Intense burning in the latter organ and the œsophagus. Convulsive action in the right arm. Passed a hollow bougie up the rectum, through which large enemata were administered. Cups repeated.

During the day he took calomel 40 grs., and croton oil ♏xi, which produced much pain, but no evacuation.

*14th.* Vomiting of fecal matter; abdomen more tense; pulse 130. Applied 16 leeches, which brought on great prostration, but relieved the tenderness. Passed the tube 18 inches up the colon and gave another large enema without effect. Vomiting of fecal matter continued several times a day until the 17th. Thirst somewhat alleviated by the application of ice water to the lips and a wet cloth to the throat. Supported entirely by injections of nutriment and anodynes. Violent cephalalgia at times with photophobia. No particular change occurred until the 22d, when we noticed a distinct elevation in the right iliac region. The introduction of the tube brought away some fetid gas. Enemata returned unchanged. For several days the patient refused to submit to any further treatment, and nothing was done with the exception of an occasional application of croton oil endermically. Tympanitis and debility continued gradually to increase. On the 21st day of his disease, he consented to take half a pound of quicksilver. This was given with much apprehension, as, for many days he had been unable to swallow even a spoonful of water. To our surprise, it excited not the slightest nausea or uneasiness, and, in little more than an hour he began to discharge large quantities of flatus, which afforded him much relief. For the next four days he was rather more comfortable, and on the 5th and 6th he had several evacuations of fecal matter, accompanied with great pain. In the first motion there was a large quantity of dark coagulated blood. On the 26th day from his attack we began to feel highly encouraged at the appearance of our patient, who partook freely of soup, brandy and water, &c. His pulse became reduced from 130 to 96 per minute. On the night of the 27th day, however, matters began to look more unfavourable. There was difficulty in urinating, and we were obliged to use the catheter. We may here observe, that up to this period, his urine had been free and abundant. After the exhibition of the quicksilver, it was of a peculiar smell and colour evidently arising from that substance. About midnight of the 27th he complained greatly of the pain in his abdomen, and stated that it was more severe than ever. His pulse soon became almost imperceptible, cold clammy sweats with great prostration succeeded, and he died at noon, on the 28th day from his attack.

*Post-mortem.*—We examined his body about 4 hours after his death. Emaciation considerable; abdomen tympanitic. On opening its cavity we found traces of inflammation throughout almost the whole of its extent. Large quantities of sero-purulent matter, mixed with another dark substance as if effused from the intestines. The descending portion of the colon was greatly distended with air, and at the left part of the transverse arch the bowel was contracted, whilst the portion above was filled with fecal matter, but yet smaller than the part below. About 3 inches of the left portion of the transverse arch of the colon was removed, and, on laying it open, it

presented the appearance as seen in accompanying figure. The canal was blocked up with the scirrhous mass, so as to admit with difficulty the extremity of a goose quill, fig. *a*. At its left extremity was a perforation large enough to admit the little finger, fig. *b*. The effusion through the opening had un-




doubtedly produced the sudden and alarming prostration observed a few hours before his death. The ileo-cœcal valve was normal. At the lower part of the ileum, at about six inches from its junction with the cœcum, we found a small quantity of quicksilver, probably one-third of that administered; the stomach was enormously distended with air; spleen rather large and hard; nothing abnormal in the other viscera.

Case III. *Absence of the Uterus—obliteration of the Vagina.*—About the middle of March, 1844, a female came under my care, labouring under a complete adhesion of the walls of the vagina and an absence of the uterus. She was 22 years of age, of a masculine appearance, and stated that she had always menstruated by the month. Her menses commenced at the usual time, and the discharge occurred regularly every month. She

had been twice married, but was abandoned by both of her husbands on account of her peculiar condition. Her sexual desires were strong, and she was exceedingly anxious to submit to an operation, for the restoration of the vaginal passage. This, she thought, was once natural, and she attributed the adhesions to excessive indulgence in sexual intercourse, in her 16th year. There was a small projection in the situation of the clitoris, having somewhat the appearance of that organ.

Having placed her in the usual position for lithotomy, with the labia separated by an assistant, I carefully dissected the parts from the meatus urinarius backwards between the bladder and the rectum to the extent of 4 inches. It was one solid mass, and there was no cicatrix, neither was there any appearance to lead us to believe that the vaginal passage ever had existed. The operation was followed by considerable hemorrhage. The dissection terminated in a cul-de-sac, and after the most careful examination with the fingers and probe, not the slightest trace of an uterus could be found. A tent was introduced to keep the parts dilated, and, although some contraction of the parts again took place, months after the operation, she stated that it had fully realized her expectations.

Case VI. *Large Abdominal Tumour—favourable termination.*—In the early part of Dec., 1844, I visited with Dr. Houghton, of St. Andrews, a female in his vicinity, who was supposed to be labouring under ovarian dropsy. She was about 40 years of age, and her attention was first directed to the enlargement of her abdomen, some 2 years before. There was a distinct fullness in each iliac region, and a still greater enlargement in the left hypochondrium, the nature of which it was impossible to decide. At one time, she was supposed to be affected with ascites, and the physician formerly in attendance, had proposed to perform the operation of paracentesis. This, however, was not accomplished. She observed that the iliac tumours had commenced with pain, but in the other she had experienced no uneasiness with the exception of that occasioned by its bulk, which was that of the ordinary size of an adult's head. Her sister had recently died of ovarian dropsy, and from all that we could learn of the history of the case, and after a careful examination of the parts per vaginam, &c., we were forced to the conclusion that she was affected with the same disease. In relation to the tumour in the upper part of the abdomen, we were unable to say whether it was the spleen in a state of suppuration, or whether it was connected with iliac tumours, as the development of all was nearly simultaneous. Her strength was rapidly failing, and she despaired of recovery. Our prognosis was, of course, unfavourable. We directed that she should be placed under the influence of iodine both externally and internally, and the electro-magnetic battery. The following extract from a letter which I received a few days afterwards from Dr. H. will show the progress of the case. "On the 3d day after the use of the battery and other means, the

tumour over the spleen gave way, and at once discharged by the rectum a gallon of pus, as stated by the patient and friends. I had previously operated over the tumour with the full power of the machine. Chills and considerable excitement with some pain followed, and I concluded to desist from the use of it for a few days. The result followed as stated, and, in my absence, the physician formerly in attendance was called. The two iliac tumours remain the same, and she is very much prostrated. Her case will probably terminate unfavourably. The action of the machine most likely hastened the bursting of the tumour. There is a daily discharge of pus per anum, to what extent, I cannot say; but from accounts it must be considerable, say 18 or 20 ounces." Some two weeks after the commencement of the discharge per anum, I visited the patient, who corroborated Dr. Houghton's statement. She observed that on the day before my visit, the discharge had ceased; the iliac tumours had also subsided. She was very much exhausted but her appetite was good, and she was under the liberal use of tonics. By the judicious subsequent treatment of her family physician, (Dr. Fowler, of Walden,) this lady has regained her health, and, as I have been recently informed, is now able to perform her domestic duties. When I last saw her, the appearance of her abdomen was perfectly natural.

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ART. VI.—*Experiments to determine the Physiological effects of Conium Maculatum.* By PLINY EARLE, M. D., Physician to Bloomingdale Asylum for the Insane, New York.

THE conium maculatum, in the form of extract or inspissated juice, is somewhat extensively used in general practice; and, being considered, as it unquestionably is, a narcotic, is not unfrequently prescribed as a *soporific.* Having for several years been accustomed to the free use of this preparation in the treatment of insanity, without ever procuring sleep as its effect, even in doses gradually raised to sixty, eighty and ninety grains, three times in the day,—and having not long since heard an eminent physician, who prescribes for his patients "nearly a hundred dollars worth" annually, express a doubt that this extract has "any medicinal virtues whatever," I determined to ascertain, by self experience, the nature of its immediate effects upon the human system.

On the first of January last, I commenced taking an extract prepared by Lee & Butler, of Hartford, Connecticut, The following schedule exhibits the results of the experiment.

*Jan.* 1*st*, took 1 grain 3 times; morning, noon and evening.
" 2*d*, took 2 grains 3 times; " " "
" 3*d*, took 3 grains 3 times; " " "

Had some headache in the region of the temples, attributed to a slight cold.

*Jan. 4th*, took 4 grains 3 times; morning, noon and evening.

" *5th*, " 5 grains 3 times; " " " Slept 7½ hours.

" *6th*, " 6 grains 3 times; " " " Slept 8 hours.

" *7th*, " 7 grains 3 times; " " " Slept 6½ hours.

" *8th*, " 8 grains 3 times; " " " Slept 8 hours.

Had a slight pain from temple to temple several times, during the day.

*Jan. 9th*, took 9 grains 3 times; morning, noon and evening. Slept 8¾ hours.

" *10th*, " 10 grains 3 times; " " " Slept 7½ hours.

" *11th*, " 12 grains 3 times; " " " Slept 8 hours.

A slight, dull pain through the anterior portion of the head, with "ringing in the ears;" probably caused by temporary indigestion.

*Jan. 12th*, took 14 grains, morning, noon and evening. Had a headache in the forenoon, which, upon taking soda bicarb. ʒss. was relieved. Slept 7¾ hours.

*Jan.* 13th, took 16 grains morning, noon and evening. Slept 7½ hours.

" *14th*, " 20 grains " " " Slept 7½ hours.

" *15th*, " 25 grains " " " Slept 7½ hours.

The morning dose was taken as usual, before eating. While at the breakfast table, I felt a disagreeable sensation, like the "fulness of the head" occasioned by a ligature around the neck. This was accompanied by a very slight vertigo.

These effects were not perceived after either of the subsequent doses taken this day. Slept 7½ hours.

*16th*, morning; took 30 grains; effects not so great as yesterday morning. 10 o'clock, P. M., took 40 grains upon an empty stomach. It was followed by a greater tendency to vertigo than before, with a sensation as if the eyes were swollen and unnaturally protuberant. Evening, took 40 grains two hours after supper. Similar effects, but in a slight degree, and less than on the morning of the 15th, with 25 grains taken fasting. Slept 7½ hours.

*17th*, morning; 15 minutes before sitting to breakfast, took 45 grains. While at the table, the sensations of fulness of the head and tumefaction or enlargement of the eyes, were uncomfortable and oppressive. The eyesight slightly dim, became more so upon rising from the table, and the tendency to vertigo was at the same time increased. There was a feeling of mingled weariness and weakness in the knees, and the gait was not so firm as usual. Pupils of the eyes apparently somewhat dilated. 1 o'clock, P. M., took 45 grains soon after eating an apple. In 15 minutes there was a sensation of heat in the gastric region, followed by symptoms similar to those just described, though not of nearly so great severity.

Evening; took 45 grains. Effects much the same as at 1 o'clock. Slept 7¾ hours.

18*th.* Morning, took fifty grains; vertigo commenced in 20 minutes, and in 30 minutes the dimness of vision and peculiar sensation in the knees already noticed. I now felt, for the first time, the sensation last mentioned, in the lower part of the *biceps brachii* muscle. I particularly studied this feeling and can give no idea of it except by comparing it, as already done, to a mixture of weariness and feebleness or debility. It was not unpleasant, and there was a constant disposition to flex and extend the forearm. Pupils apparently dilated. 10 o'clock, P.M., took sixty grains. 10 minutes afterwards, the warmth in the gastric regions was perceived, and in 15 minutes cerebral symptoms commenced. In 35 minutes the action of the medicine appeared to have reached its maximum, which it maintained about fifteen minutes, with the sensations in the head, elbows and knees already described, and to a greater degree than after any dose previously taken. In 1½ hours from the time of taking it, its apparent effects had entirely disappeared. 9½ o'clock, P.M., took sixty grains after eating apples. The action was less powerful than in the middle of the day. Slept 6½ hours.

19*th.* Took sixty grains 12 minutes before breakfast. In 35 minutes all the symptoms before mentioned were felt, to a greater extent than at any previous time. Vision was, for the first time, double. Directing the eye to an object at the distance of 15 feet, that object, for a moment would appear single. Immediately, however, two images became visible and slowly receded from each other to the apparent distance of about 6 inches. Here they generally became stationary, but at times would continue alternately to approach and recede from each other. Upon going up stairs, the knees were so weak as to render the ascent very difficult without assistance by taking hold of the balustrade. Pupil apparently dilated. 2¾ o'clock, P.M., took sixty grains immediately after dinner. The influence of the dose was far less than of that taken in the morning. 10½ P.M., took sixty grains just before going to bed. The effect was greater than in the middle of the day, but less than in the morning. The recumbent position might have had some influence in diminishing the appreciation of this effect. Slept 7½ hours.

20*th.* Took sixty grains immediately after breakfast. Less affected by it than yesterday morning, although a slight degree of double vision was experienced, together with all the other symptoms heretofore mentioned. One o'clock, P.M., took sixty grains after a "lunch." Effects about the same as in the morning.

Seven successive doses, of sixty grains each, had now been taken, with the intention of farther increasing the quantity. Having, however, satisfied myself of the properties of the medicine, and believing the experiment to have been carried as far as prudence would dictate, I determined forthwith to stop. In the evening, a glass of currant wine was substituted for the

medicine, and I did not feel either at that time or subsequently, any unpleasant effects from the immediate suspension of the latter. Aware of the fact that the extract of conium imported from Great Britain, is generally (though with many exceptions) believed to be superior to that of American production, I resolved upon testing its strength.

Having procured a quantity of the latest importation bearing the mark of Mander, Weaver & Co., Wolverhampton, I commenced taking it on the 1st of February, ten days after the termination of the trial of the American extract.

Commencing with one grain, three times in the day, the dose was increased by one grain every morning, as in the former case, until the 10th of the month, and, subsequently by two grains, until the 13th, when it amounted to sixteen grains *ter in die*. At that time no sensible effects were, or had been perceived. From the 8th to the 13th, the daily time of sleep was 7¾, 8, 7½, 7, 8, and 7½ hours successively.

14*th*. Took twenty grains, three times. Slept 5 hours.

15*th*. Took twenty-five grains, three times. No sensible effect. Slept 7 hours.

16*th*. Morning, took thirty grains; mid-day and evening, forty grains each. Slept 8¾ hours, "making up" for the loss of sleep on the 15th.

17*th*. Took forty-five grains three times. Slept 7½ hours.

18*th*. Took sixty grains in the morning, and seventy each at mid-day and evening. The first apparent effect was at noon, this day, and was to about the same degree, and of precisely the same character of that of the American extract, on the 15th of January, in a dose of twenty-five grains. Slept 7½ hours.

19*th*. Took eighty grains in the morning, ninety grains at noon, and one hundred grains in the evening. I had some headache, with diminution of appetite, throughout the day, and consequently ate very little at supper.

The evening dose, taken after several hours fasting, and its influence augmented by the cephalalgia, affected me more unpleasantly than any former portion during either trial. There was double vision, but not to the same extent, nor of so long duration as with the last doses of the American extract. The same remark is applicable to the sensation in the elbows and knees. The cerebral oppression, however, was extremely unpleasant and oppressive. The pulse, during the period of greatest influence, and while I was sitting, beat with undeviating precision, 60 strokes in a minute. This is, perhaps, two or three beats below its natural velocity when the body is at rest. It was also fuller and stronger than usual. It might have been modified by the general condition of the system on that day, but this influence would probably have increased its rapidity.

Some writers attribute diuretic properties to the conium. There was no perceptible augmentation or diminution of the urine during the course of

these experiments. On two occasions, once after taking one of the largest doses of the American, and once after one of the largest doses of the British extract, I felt an acute, lancinating, and transient pain in the region of the neck of the bladder, similar, as I suppose to strangury. Having never experienced a sensation of the kind, either before or since, I believe it to have been caused by the medicine.

The size of the pupils was judged of only by comparison with those of the eyes of other persons at the time. This criterion not being altogether accurate, it is impossible to determine whether actual dilation was produced by the medicine. Even if it were, this effect was very slight.

The phrase "tendency to vertigo" has here been used, in preference to the word vertigo, simply because this effect, thus described, was not sufficient at any time to destroy the ability to walk straight. The instability of the gait was, or appeared to be principally owing to the effect upon the muscles in the vicinity of the knees.

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ART. VII.—*Remarks on the Climate, Diseases, &c., of Middle Florida—particularly of Gadsden county.* By ROBERT EDMONDS LITTLE, M. D., of Quincy.

GADSDEN, one of the most northern counties of Middle Florida, extends from the Georgia line on the north, to the Gulf of Mexico on the south, a distance not far short of one hundred miles,—while its eastern and western boundaries are the Apalachicola and Ockoloknee rivers.

The northern portion of the county (the part most densely populated), is watered by numerous streams of considerable magnitude, the principal of which, beside the above named, are Little river, Willacoochee, Tellogee and Rook Comfort creeks. Their banks are low and often so boggy as to cause it to be necessary for the road over them for the distance of several hundred yards to be elevated, so as to render the stream approachable. These waters are clear and usually not unpleasant to the taste. The face of the country is for the most part rolling—especially the rich portions of it in the neighbourhood of the hammocks,* while the pine lands are tolerably level; the former fertile, producing in abundance all the great staples

* The word hammocks is applied indefinitely in many parts of the territory; in one quarter it is used to signify "a thickly wooded place:" in another "a mound raised out of a swampy tract of land;" and again it is supposed to be a corruption of Tomaka, the Indian name for a river whose banks are covered with hammocks or swamps. Webster derives it from the Spanish word hamucu, referring to the beds used by sailors, and as the soil of which these hammocks are composed seems to be raised above the surrounding water.

of the climate,—the latter are poor and little adapted to cultivation unless manured, being principally used as ranges for cattle, of which many of the planters possess an immense number. The hammocks are covered with a growth of cane, oaks, hickories, poplars, sweet gums, red bays, magnolias, &c., and vary in width from fifty yards to a mile—the soil of which they are composed is a black loam, based upon a bed of clay. In passing over the country the traveler frequently meets with barrens, dotted here and there with stunted oaks, pines, and prickly pears, which, however, are soon forgotten in beholding beautiful plains, shaded by stately pines; now and then green mounds, the receptacles of the dead—and not unfrequently a glassy pond, whose sparkling waters are so many mirrors reflecting the beautiful verdure of the live oaks which dip their wide-spreading branches far over its banks. In the early settlement of the country when land was easily obtained, no care was taken to prevent a deterioration in fertility—hence many fields are now lying in a waste condition, not worth cultivating, which will, however, in the course of a few years be entirely renovated and capable of producing as well as formerly,—no land in the world being more susceptible of improvement by rest.

The great staple of Middle Florida is cotton—but since its depreciation in value, many of the planters are turning their attention to the cultivation of tobacco, a species of which is produced in many portions of the district, almost equal to that of Cuba. Rice and sugar cane grow well and are cultivated in quantities sufficient for domestic use;—the latter might be made an article of considerable revenue, as the soil and climate seem to be peculiarly adapted to its cultivation. The fig and orange arrive at perfection, and with care might be rendered a source not only of luxury, but profit. From the slips they bear fruit in a very few years, and the only attention necessary to bestow on them, is protection from the frosts of winter until they are matured. The apple, pear, cherry, grape, gooseberry, and currant are unsuited to the climate, seldom arriving at perfection—while the peach and melon flourish, affording during the summer an abundance of agreeable fruit. The long continuance of warm weather prevents a proper attention being paid to gardening, yet so mild are our winter and spring months, that almost every article usually found in gardens in more temperate climes is capable of being produced in profusion. The Irish potatoe, onion, and cabbage, degenerate after the first year's cultivation—their produce being small and of unnatural flavour, while the sweet potatoe furnishes a considerable portion of the population with an agreeable article of food, the soil being very favourable to its production.

The flora of Middle Florida is peculiarly rich in the variety and beauty of species, the surface presenting one vast bed of flowers. And no portion of the American Continent is so plentifully supplied with insects and reptiles as is this "land of flowers." In rambling through the woods scarcely a leaf can be turned, or brush disturbed without breaking in upon

the slumbers of some "creeping thing," whilst at night, during the summer season, our ears are assailed by the buzzing of myriads of mosquitoes in their *murderous* attacks upon those of us who are so unfortunate as not to have provided bars as a means of defence. So formidable are their stings, that cattle and deer are often compelled to leave the swamps, and take up their residence in the pine woods to avoid them.

In all parts of Florida is to be found a species of land tortoise, called the Gopher (*Gouffre*, French), (Testudo Polyphemus). Alligators of large size are numerous, and on the banks of the Apalachicola, on a bright day, hundreds of these monsters are to be seen basking in the rays of the sun, ready to pounce on any prey that may be so unlucky as to be accidentally thrown in their way or so hardy as to approach them.

Of the feathered tribe we have a great variety—especially aquatic—the most prominent of which is the large wood pelican; an awkward bird in its movements on land, but when placed upon its congenial element, graceful. Large droves of the paroquet are seen, a noisy but beautiful bird, singularly graceful and rapid in flight.

As objects of greater interest to the sportsman, various quadrupeds are found in a wild state. Luxuriant in vegetation, the territory affords ample opportunity for the hunter to indulge in the exciting chase after deer, and for the hardy woodman to hunt bears. Wolves and panthers are numerous, frequently proving troublesome to the settlers.

Of the climate of our American Italy much has been said, and situated as Florida is, in the southernmost part of our great confederacy, for years past it has been looked to with the hope of its possessing a climate capable of affording relief to those afflicted with diseased lungs, scores of whom annually leave their northern homes but to languish and die on a foreign shore. Whether this hope is likely to be realized or not, time alone can certainly determine.

Warm weather usually makes its appearance about the middle of April, and continues with but little variation until the last of September; when the mornings and evenings begin to grow pleasantly cool—although the weather remains at mid day warm until November is ushered in. During the last two months of the year, the days are pleasant; but few blasts of cold weather sweeping across the land to remind us of overcoats or cause us to desire to exchange our pine knot for the anthracite fires of our northern friends. Although hot weather is of long continuance, the thermometer seldom indicates a temperature higher than 95°, the mean heat of January being 55°, of July aud August 87°; and of November and December 53°. At this point (Quincy inlet, 30° 40′,) a breeze from the Gulf of Mexico is generally felt about ten in the morning—which continues until late in the evening, thus mitigating considerably the heat of summer and rendering our almost tropical clime not only endurable, but pleasant at a time when the inhabitants of a more northern region are sighing for the zephyr's

breath to stir the dormant, sultry atmosphere with which they are surrounded. Our nights in summer are cool, especially towards the latter part,—so cool, indeed, as not unfrequently to make it necessary to add a blanket to the usual articles of clothing. In summer, droughts of long duration are not uncommon—much to the injury of the planting community. The spring months are those most usually productive of rain, which falls not gently for a few hours, but in torrents, and for whole days with such impetuosity as to have gained the distinctive name of "Florida rains." As the banks of the water courses are low, they are easily overflowed; the rush of waters sweeping every thing before them, fences, bridges, &c. nothing being safe from their desolating influence. Such was the case in the spring of last year. For three days the rain fell in such torrents as to darken the atmosphere, rendering it almost impossible for a man to be recognized at the distance of twenty steps. The streams were carried far beyond their banks; lagunes overflowed; roads rendered invisible; in short, the appearance of the whole country was changed. Traveling was suspended for weeks; as well as intercourse between neighbours; all waiting for a subsidence of the waters and rebuilding of bridges, many of which were swept away—all injured. Rains are usually succeeded by pleasant weather, the surface of the country drying in the course of a few hours, the soil being very absorbent.

The summer winds generally come from the south and west, and when these are accompanied by clouds, rain is pretty sure to follow; while northern winds seldom precede or attend rain. From our proximity to the Gulf of Mexico, tornadoes are not unusual. The one which occurred in the fall of eighteen hundred and forty-three will be long remembered, because of its violence and the destruction of property caused by it. Port Leon, St. Marks, and most of the settlements on the Wakulla were destroyed. The gale commenced in a gentle breeze, causing but a slight agitation of the waters and rustling the leaves; gradually it increased, the waves began to lash the banks and the trees to bend; and after a time to be prostrated, unable to withstand the fury of the enraged elements. Time only served to add strength to the winds, and they ceased only when every thing had fallen before them. Gales such as that alluded to seldom occur in this region, although almost every spring and fall are attended by storms of considerable violence.

Our coldest months are December and January. The past was the most severe winter experienced in Middle Florida for the last twenty years; in several instances the small pools of standing water caused by the hoofs of horses, were frozen over and remained so until nine o'clock in the morning. Snow has fallen but twice in the last eighteen years, and then only in quantities sufficient to give the ground here and there a white appearance. Atmospheric changes are frequent, the mercury falling and rising again 15° to 25° within a few hours; but fortunately the cold *spells* last but

a few days at a time and are succeeded by weather most delightful to the invalid; although the changes are sudden, there are but few days in winter so unpleasant as to prevent the valetudinarian from taking necessary exercise in the open air either on foot or horseback. As before remarked, an opportunity is seldom wanting in winter to indulge in the chase after deer, or the less fatiguing sport of hunting wild turkeys.

In the villages, the accommodations for the sick are good—the hotel tables being bountifully supplied with all the delicacies of the season, a circumstance heretofore much complained of, to say nothing of the exorbitant charges of the worthy Bonifaces of our land.

Separate and apart from the evidence of meteorological registers, we are strongly inclined to the opinion that the climate of Middle Florida presents inducements as a winter residence to those who are predisposed to, or have already contracted tuberculous affections in a northern latitude (provided they are not far advanced), equal to any portion of the eastern division of the territory; taking into consideration the influence of good society—accommodations, &c. Towards the permanent restoration of advanced cases nothing can be done; such we would advise to remain at home and not to seek a grave in a strange land.

A common opinion prevails at the north, not only among the uninformed, but even among physicians, that consumption is a disease that rarely originates in warm climates, an opinion not more common than erroneous. In the southern country tuberculous diseases are often met with, not the result of colds—but of the long continuance of warm weather and the use of food almost entirely vegetable, circumstances tending to produce a debilitated state of the system. This cause is not liable to operate with the same force upon natives of a northern as upon those of a southern region, the former, reared in a climate whose tendency is to invigorate the frame and render it capable of enduring for a number of years the debilitating influence of warmth, resist phthisis for a great length of time, while the latter, subjected from infancy to a high temperature, early fall victims to tuberculous cachexy upon the occurrence of even the slightest agent in its production.

The prevailing diseases of this portion of the southern country are those which are supposed to have a relationship or connection with that peculiar agent termed malaria, and our territory is rich in all the elements favourable to the elimination of this poison, viz: vegetable matter in a state of decomposition; high temperature and moisture; a union of all these being necessary, or either alone being capable of generating it, while a superabundance of the latter, moisture, although the other constituents are in exact proportion, prevents its formation. No fact is better known in the southern country, than that for the first few years after the settlement of a particular district, its inhabitants are more exposed to disease than in after years, because of the evolution of miasm in large quantities, caused by the felling of the forest and cultivation of the soil; a greater amount of the

earth's surface being exposed to the action of the sun's rays, but in subsequent years when it has been deprived of its superabundant vegetable matter and well drained, its inhabitants are exempted in a great measure from malarious diseases. The pine lands which are dry and removed from the water courses, are always considered healthy; one of the malarial elements, moisture, being absent; a fact also strikingly illustrated in the epidemics which annually devastate Egypt, caused by the overflowing of the Nile,—the disease never extending into the arid plains of the desert. An excess of moisture tends to the destruction of any poison which may have been in existence prior to its creation, for instance flat places in ordinary seasons unhealthy, become healthy if completely overflowed, while, on the contrary, high lands where sickness was never known to prevail before, emit a miasm which sweeps every thing before it. The advice of Lancisi to those traveling near the Pontine marshes, not to do so after dusk or early in the morning, as the dew in their neighbourhood is largely adulterated with miasm in a concentrated state, might well be given to travelers in Florida, where the dews are remarkably heavy, and, from the great susceptibility of the system in warm climates to the impression of morbific agents, capable of doing much injury at that time.

*Dirt Eating.*—Apart from the sickening influence of malaria, we cannot refrain from noticing the degeneration, mental and physical, of children reared in this extreme southern portion of the union. During our first months' residence in Florida, in passing through the country, we often stopped boys on the road, not over ten or twelve years of age, who presented the most abject state of degeneration imaginable; with head and body large, limbs shriveled and deformed, eyes dull and of a bilious tinge, lips colourless, and features distorted. This degeneration, by many, has been attributed to dirt-eating, a propensity very general throughout the whole country.

Having completed a general and consequently incomplete description of the physical phenomena of a portion of the territory, reference will now be made to its diseases. If the remark made by Dr. Macculloch be true, that the disorders produced by malaria include more than half the number, prevailing at any moment throughout the universe, it may readily be inferred from what has been said above, that a majority of our diseases are *malarial.*

*Intermittent Fever.*—There is no disease with which physicians are supposed to be better acquainted than intermittent fever—but on the other hand it must at the same time be confessed, there are few which occur under so many different circumstances—modified by so many causes, both malarial and geological, and so difficult to be recognized in its anomalous forms. But few cases of an inflammatory character are met with—they are usually adynamic and complicated with visceral obstructions, and if suffered to go on, degenerate into remittent or congestive fever, or assume

the appearance of slight apoplectic or epileptic attacks; palpitation of the heart, toothache, "sun pain," &c.—diseases Dr. Macculloch would have us believe identical with intermittent fevers, because of their liability to slight remissions—their alternating not unfrequently with it, and their being cured by the same remedies. Enlargement of the spleen and night sweats are the most troublesome sequelæ of intermittent fever. When the disease becomes chronic, the intellect is impaired—which, together with the physical degeneration, renders life a burden. Relapses are frequent, and each succeeding attack increases the susceptibility of the patient to another.

*Remittent Fever.*—Intimately related to intermittent fever, and produced by the same cause is bilious remittent fever, the prevailing febrile disease of our summer months. So much do the two diseases resemble each other, as to be considered by many as identical, or at any rate modifications of the same disease, an opinion not destitute of foundation, as their symptoms during life, and morbid appearances after death, differ only in degree.

The disease is usually ushered in by a chill, sometimes severe, frequently nothing more than a cold sensation, (which occurs as a general rule every twenty-four or forty-eight hours) followed by pain in the back and limbs. The tongue in the early stages of remittent fever is moist, and presents a white or yellow appearance, but as the disease advances, it becomes dry and the colour changes to a dark brown. Pain in the head is a common symptom, frequently continuing through the whole progress of the case. During the stage of excitement, the pulse is increased both in force and frequency, while, during the remission, it is scarcely above the natural standard, frequently below it. The bowels are commonly torpid, requiring the most active cathartics to excite them. After the disease has continued for four or five days, epigastric tenderness is not uncommon, attended by weight or tension, requiring for its relief the abstraction of blood locally, blisters, &c.

The condition of the skin varies during the stage of excitement; its temperature is much increased, while it is not unfrequently lessened during the remission. In grave cases its colour is inclined to be yellow; in slight and even in tolerably severe cases, its appearance is not materially changed.

The intelligence of the patient being influenced by the violence of the headache, it may be readily inferred that in the beginning of both *recovered* and *fatal* cases where there is much pain in the head, delirium is not an an uncommon symptom during the exacerbation. In fatal cases towards their termination, there is generally low muttering delirium or coma.

Remittent fever in this climate, as a general rule, terminates in from three to ten days.

*Congestive Fever.*—Of all the diseases incident to a southern climate, no one, perhaps, is so much dreaded by the profession, as congestive fever, a disease which, unless arrested in the onset, is generally attended by the

worst consequences. Its attack is preceded by precursory symptoms, sudden and violent, and, unless the most prompt measures are early used, it runs its course in from twenty-four to seventy-two hours. For several days prior to an attack, the subject of it complains of general malaise with derangement of the chylopoietic viscera; finally a chill supervenes which ushers in the disease in all its violence. The pulse is now exceedingly feeble; breathing quick and laborious; the tongue moist; bowels usually costive; they are, however, sometimes fully acted upon, and not unfrequently there is nausea and vomiting. The patient complains of *internal heat* and of a heavy load pressing on the epigastric region; his calls for water and efforts to throw off the load pressing him are frequent. As the disease progresses the extremities become very cold and shriveled; pulse almost imperceptible; intellect clouded; spittle spontaneously flows from the mouth; subsultus supervenes; the skin grows colder, is covered with a cold clammy perspiration, and loses its natural colour, particularly that of the face, and finally it is not uncommon for the case to terminate in convulsions, especially if there be congestion of the spinal cord. Such are the symptoms most usually observed. We have not attempted a full description of them, as they are modified by a variety of circumstances—such as seat of congestion, &c.

During the summer and fall seasons, cholera infantum, diarrhœa and dysentery are very prevalent, as might be inferred from the temperature of the weather and locality of the country, being produced by nearly the same causes that give rise to intermittent and bilious fevers. To a variety of other causes have they been attributed, as, for instance—to eating fruit, to heat, &c. Facts, however, seem not to favour the supposition. That fruits in moderation are prejudicial to health or productive of disease, we cannot believe, as, during seasons of great scarcity these diseases are not uncommon, while it is not ascertained that they occur more frequently during seasons of plenty than at any other time. A rigid proscription of them will not prevent an attack of cholera infantum or diarrhœa, nor will a free use of them bring on disease without the influence of other agents, as is witnessed in families where no restraint is imposed on the children in eating apples, melons, currants, and other fruits, even before they are matured. That heat alone is incapable of giving rise to the above diseases we are assured from the circumstance of this not being most prevalent during the warmest summers. Hence, we must conclude that other causes than warm weather and the use of fruits are necessary to their production. From the prevalence of febrile diseases and of bowel complaints and disappearance at about the same time, it is altogether probable that they are engendered by one common cause.

Diarrhœa and dysentery are not usually found uncomplicated with other disease. They are, for the most part, sequelæ of obstinate or badly treated cases of fever, and require for their removal a long course of treatment.

In the tropical climate of the southern states the liver is most generally

the suffering organ in disease, as the respiratory apparatus is at the north; as a consequence, the affections to which it is prone are numerous—often slow in their attack and progress, and liable to be misunderstood from their obscurity. The organization of the liver, its immense size in comparison with the other abdominal organs, and the important office that it is called on to perform, force the belief upon us that any derangement either in structure or function must be attended with consequences which will sooner or later, if not relieved, undermine the health, cause the patient to drag out a miserable existence, and finally end his career, a victim to delay and inefficient or misapplied medical treatment.

As acute hepatitis is uncommon in this climate, except as a result of the chronic form, a consideration of it will not be had, our object being to speak more particularly of the latter, as it is a disease daily encountered by the southern practitioner. In saying that acute hepatitis seldom occurs except as a sequel of the chronic form, we wish it to be understood that the disease is scarcely ever a primary affection itself, and that it usually supervenes upon or is rather an aggravation of the last named variety. For years patients will labour under a variety of symptoms, without being able to determine or even suspect their cause, when suddenly they are aggravated, or a new one in the catalogue appears, and its true nature revealed. Such is its insidious Protean character.

Middle Florida has been visited by scarlatina very rarely. Sporadic cases are occasionally seen, mild, however, in character. About the first of January last, it made its appearance in the village of Quincy, extending its ravages to some two or three plantations in its immediate vicinity. It was confined to a few families, several members in each being attacked, varying in age from one to ten years. The two first cases that happened were marked by a peculiar malignancy and terminated, we believe, within thirty-six or forty-eight hours from the commencement of the attack. They were for a time supposed not to be cases of scarlet fever, but subsequent cases, similar in many respects, revealed to the attending physician the true nature of the disease, which, in the course of the epidemic, assumed all appearances from the mildest to the most malignant. The patients were, as a general rule attacked suddenly, either with pain in the head or vomiting. No two cases presented exactly the same appearance. In all severe cases the heat of skin was great from the commencement to the termination of the disease. The pulse was frequent in some cases, whilst in others it was slow, respiration difficult, and the thirst tormenting. In a majority of cases there was no affection of the throat complained of, while in others there was soreness of the fauces and neighbouring parts for a month after the fever had subsided. In two or three instances the glands of the throat swelled and suppurated, giving rise to troublesome sores. The absence of, and the singularity of the eruption when present, gave rise to a doubt among some, whether the disease was scarlatina or not. Its absence

was no just ground for doubt, as it often appears without the eruption being present, constituting the *scarlatina sine eruptione* of some writers, and the *scarlatina sine exanthemata* of others. The eruption, when it manifested itself, appeared simultaneously with the other symptoms, and presented a variety of appearances—in some, it was papular, and in others miliary. The eruption coalesced in a very short time, became pretty uniform over the whole body, and faded or assumed a livid appearance in the fatal cases prior to death. Vomiting and purging in the commencement of the disease were always grave symptoms, and, if we remember correctly, both of the fatal cases which we witnessed had liquid operations for a few hours before their termination. The determination to the brain in many cases was excessive; when this happened, unless a decisive plan of treatment was resorted to, convulsions would ensue, and the patient die comatose. This was the case with a fine little boy of this place, a son of Judge Allison. In the morning he was restless, and seemed to have contracted a slight cold; no attention was paid to him, save the administration of a mild aperient; towards evening, while resting on his nurse's knee, convulsions came on, and, notwithstanding an active course of treatment, he died comatose on the third day of his illness. Two or three cases were reduced very low by the supervention of enteric symptoms, which were difficult to relieve.

As before remarked, the disease was confined to a few families, and these were either in the same quarter of the village or related to each other, and in the habit of constant association. Its increase was gradual. When it commenced it usually attacked all the younger members of a family in succession. Several had the disease who held no communication with the sick or convalescent, while many escaped who were often in the sick room. As to its contagiousness or non contagiousness we are not prepared to offer an opinion.

Nearly all the recovered cases were afflicted with some one of the sequelæ of scarlet fever. The lips, mouth and cheeks in several were ulcerated, whilst others had partial or general dropsy, which was relieved by cathartics succeeded by tonics. Slight exposure to cold, or irregularity in diet, would bring on a relapse with its attendant consequences.

Belladonna as a prophylactic, was extensively used, but so far as we know, without any good results, as a number to whom the belladonna was administered had the disease in all its violence. From the trial made, we are inclined to adopt the opinions of Pereira, who says that whilst the facts brought forward in favour of the existence of this prophylactic power are only negative, those which can be adduced against it are positive, for twenty cases of failure are more conclusive against it than one thousand of non occurrence are in favour of it.

ART. VIII.—*Fibrous Tumour of the Uterus.* By A. D. CHALONER, M. A., M. D., of Philadelphia. With two Wood Cuts.

FEBRUARY 2d, 1843, I was called to see Mary Ann Miller, ætat. 39, (coloured,) and found her suffering with a severe attack of pleuritis, of the right side, from which she recovered under active treatment. Shortly after, she was seized with a violent cough and all the symptoms of phthisis. At this time she informed me of the existence of a uterine tumour, and that a physician who had previously attended her had made an examination, and pronounced her complaint to be "a *cancerous affection of the womb*, and that *no* relief could be afforded." She refused to follow any treatment for the pectoral symptoms, and would not permit any examination of the uterine tumour.

In May, 1843, I was again called to see her, and found her dying, and on the 9th of May, I made an autopsy, assisted by Drs. N. D. Benedict and L. W. Buffington, of Philadelphia.

*Autopsy.*—General appearance of the body:—Great emaciation; on percussion, little or no dullness over the left lung; over the right lung dullness.

*Head* was not examined.

*Thorax.*—Adhesions of the entire pleura on the right side; the superior half of the left lobe of the left lung tuberculous and softened, with a few distinct cavities, and but a small portion of the lung containing air. The whole of the upper lobe of the right lung tuberculous, and one cavity containing about half an ounce of fluid.

*Heart*, dark-coloured, of natural size, and filled with coagula.

*Liver*, healthy.

*Stomach and intestinal canal*, healthy.

*Spleen*, small and softened.

*Uterus*, greatly enlarged and forced towards the left side and low down in the cavity of the pelvis, by a large globular body or tumour developed in its walls, exterior to the cavity of the uterus, and extending from the neck of the uterus to the Fallopian tube, on the right side, about *four inches in length* and from *two and a half to three inches in breadth.* The exterior surface of this tumour was of a reddish-brown colour, and there were two small lobulated tumours about one inch in diameter; one on the anterior, and the other on the posterior surface of the fundus of the uterus, (vide fig. 1, *a.*) The cavity of the uterus was healthy, and the arborescent appearance of the neck was finely shown, (fig. 2, *b* and *c*;) and the large tumour, when laid open, was lobulated, and traversed by strong fibrous bands, having a marbled appearance. The whole of the

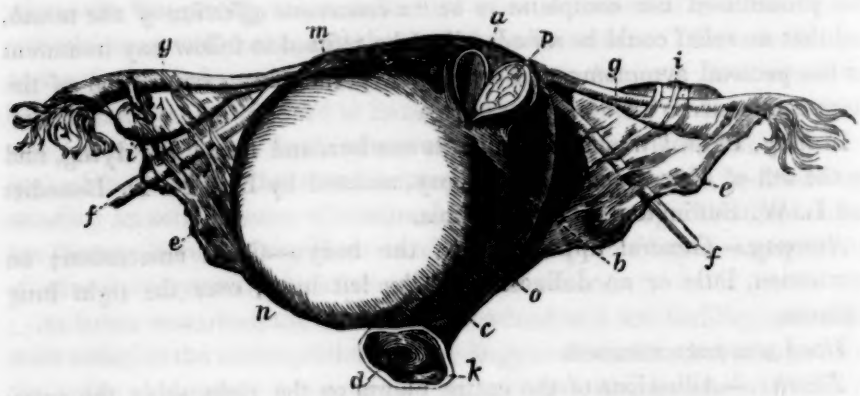
tumour being in the proper tissue of the uterus, exterior to its cavity, its weight was about *six and a half ounces.*

The *ovaries* were healthy.

The patient suffered little or no uneasiness from the tumour, which had been six years in formation. She had one child. During the existence of the tumour no discharge had ever proceeded from it.

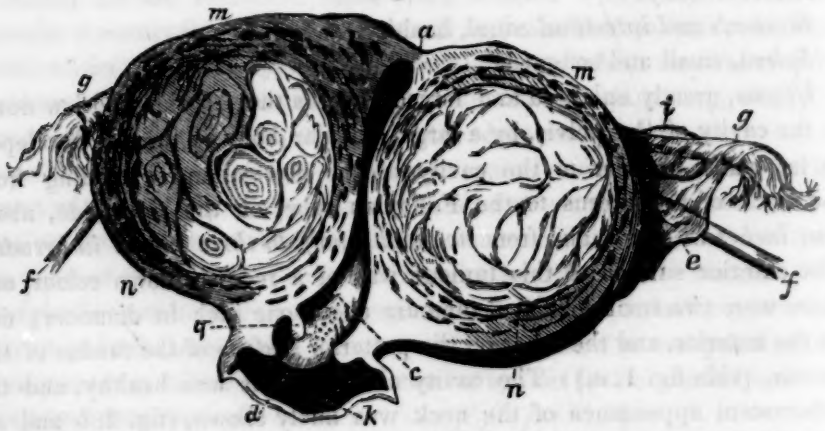
A reference to the accompanying drawings, accurately taken from nature and beautifully coloured by Mr. W. Earle Smith, of Philadelphia, will give a better impression than a written description.

Fig. 1.




*a*. Fundus.
*b*. The body of the uterus.
*c*. The neck.
*d*. Os uteri.
*e*. The broad ligaments.
*f*. The round ligaments.
*g*. The Fallopian tubes.
*i*. Ovaries.
*k*. Fragment of the vagina.
*m*, *n*, *o*. The principal tumour.
*p*. The small tumour over the fundus uteri.

Fig. 2.




*a*. The fundus.
*c*. The neck.
*d*. Os uteri.
*e*. The broad ligaments.
*f*. The round ligaments.
*g*. The Fallopian tubes.
*i*. The ovaries.
*k*. Fragment of the vagina.
*m*, *n*. The principal tumour.
*q*. Small pedunculated tumour.

## Art. IX.—*Case of Pericarditis.* By Charles C. Hildreth, M. D.

Geo. Powell, blacksmith, æt. 35, of strong constitution, and temperate habits, has for some years past been subject to hemorrhages from the nose, and occasionally to some disturbance of the heart's action.

For six months past he has had no hemorrhage; but frequently after violent exercise has been troubled with palpitations and a feeling of oppression about the chest.

On *Aug.* 15*th*, 1843, after exercise of unusual violence, and from sudden suppression of perspiration, he was attacked with violent palpitation and great præcordial distress—being unable to work, he went home, and without medical advice took an emetic of antimony.

On the 17th, he came to my office to consult me. In making an examination of his case I found but little febrile excitement, great oppression about the chest, but no cough. Impulse of the heart increased, with great irregularity in the contraction of the ventricles; pulse small, tense, intermitting, sometimes so rapid as scarcely to be counted. With the hope of arresting the incipient inflammation I bled him to approaching syncope. About ten ounces only were lost. He continued faint for half an hour, and in the mean time threw up the contents of the stomach. From the loss of blood and emesis he found considerable relief from oppression about the chest. Prescribed ten grs. of calomel and eight of Dover's powder at night, to be followed by a saline purgative in the morning.

*Aug.* 18*th*. The dyspnœa, præcordial distress and palpitation continued—has been freely purged—secretions natural from the bowels, but from the kidneys very high-coloured, frequently passed, and in small quantities. Patient cannot lie on the left side nor horizontally. Sits well, propped up in bed. In making a more minute examination of the heart, I found that no perceptible extension of the natural, dull or flat sound over it could be detected by percussion. By auscultation, found the impulse of the heart rather stronger than natural, its valvular sounds, however, not heard over an unusual extent.

Contraction of the ventricles, irregular, intermittent, sometimes extremely rapid; pulse at the wrist not always corresponding with each contraction—a distinct rubbing or friction sound (*bruit de frottement*) was found to accompany the action of the heart, indicating some obstruction to its natural freedom of motion. Pressure upwards upon the diaphragm and over the region of the heart gave pain. Having satisfactorily to myself made the diagnosis of pericarditis, I proceeded to treat the case as follows:—To allay the irregularity as well as the frequency of the heart's action, 20 drops of tinct. digitalis were given three times daily, in the infusion of cimicifuga. As the constitutional influence of mercury in inflammations of serous

membranes has an almost invariably happy effect; an attempt was made to bring the patient under its action as soon as possible. To this end, 5 grs. of calomel were given every four hours, continued with Dover's powder sufficient to prevent its passing off too readily by the bowels.

In the evening, during an exacerbation of fever, he was again bled to approaching syncope; but without much benefit, or relief from oppression.

*Aug.* 19*th.* Symptoms much the same; passed a very restless night; considerable fever; action of the heart not influenced by remedies; secretion from the kidneys very high-coloured, and passed in small quantities; pulse very irregular; oppression in breathing, and pains about the region of the heart persist. The friction or rubbing sound accompanying the contraction of the ventricles has disappeared entirely. Slight cough of a dry character. Bled again to approaching syncope, and gave one-fourth gr. morphia with calomel five grs., to induce repose at night. Continue treatment.

*Aug.* 20*th.* Patient worse; vomiting incessantly, discharging large quantities of gas from the stomach; very much annoyed by hiccough; considerable swelling of face and abdomen, of hands and feet; action of the heart very irregular, intermittent, rapid; many of the contractions of the ventricles not perceptible at the wrist.

Impulse of the heart diminished, and sounds less distinct.

Percussion indicates an extension of the flat sound over an unusual extent in the præcordial region.

The left side of the chest evidently enlarged; the intercostal spaces unusually prominent; on actual measurement a difference of an inch and a half found in favour of the left side.

Patient again bled to approaching syncope, with considerable relief to the respiration; a large blister applied over the region of the heart and drest with mercurial ointment. Syrup of ginger with fractional doses of morphia now given with good effect in allaying the hiccough, and the secretion of gas by the stomach. The digitalis and mercury continued.

*Aug.* 21*st.* Patient somewhat relieved; some evidence of the constitutional influence of the mercury—action of the heart very nearly the same; slight cough of a dry character; respiratory murmur perfect in all parts of the chest, proving the cough to be merely sympathetic. Continue treatment. Digitalis and mercury as usual.

*Aug.* 22*d.* Patient better in all respects; gums swollen; saliva more abundant; cough diminished; action of the heart more regular; pulse slower; but intermittent,—not so much oppression about the præcordial region; can lie down somewhat nearer the horizontal posture, very free secretion of urine during the night, nearly natural in colour.

Effusion into the cellular structures of the face, and extremities very nearly reabsorbed.

Omit the mercury, but continue the digitalis in doses of twenty drops three times daily, with the cimicifuga.

From this time forth the patient continued gradually to improve—a gentle mercurial action was maintained for about ten days. The digitalis was given regularly up to Sept. 4th, when it was omitted.

The pulse gradually came down to the healthy standard under the influence of the remedies; and on Sept. 1st the patient had so far recovered as to visit my office. Abstinence from all active exertion was hence enjoined for some weeks to come, in order to guard against any return of the ymptoms.

*Remarks.*—That this was a case of pure pericarditis, we think, cannot well be doubted. The early history of the case would favour this opinion, as well as the presence of all the ordinary symptoms of the disease, viz.: the pain and oppression about the region of the heart; the palpitations, irregularity, and intermission of its action, dropsical symptoms, &c.

The friction sounds heard on the 18th indicated a slight effusion of lymph or serum into the free surface of the pericardium, thus impairing its freedom of motion, and by actual contact and friction between its opposing surfaces, giving rise to the sounds referred to, during the contractions of the ventricles.

The entire absence of these sounds on the 19th indicated (in connection with the other symptoms), so great an effusion into the pericardium as to force its opposing surfaces from contact, and, of course, to destroy the sounds from friction. Diminished impulse and recession of the valvular sounds and other evidence of increased effusion.

The distension of the left intercostal spaces, the signs from percussion, the enlargement of the left side of the chest as proved by actual measurement on the 20th, establish beyond a doubt the presence of a large effusion into the pericardium. That the effusion was not into the pleura, we infer from its *location* as defined by percussion, from the absence of the ordinary signs of pleurisy, and from the great disturbance of the heart's action, the anasarca, &c., which do not ordinarily attend pleurisy.

The hiccough, on the 20th indicated an extension of the inflammation to the serous covering of the diaphragm; and the vomiting and free secretion of gas by the stomach, were evidences of the strong sympathy between the stomach and diaphragm, which, it will be remembered, are in actual contact.

The cough was also sympathetic; as proven by the perfectly healthy character of the respiration.

The anasarca of the extremities and face, was the result (as in almost every other instance) of pressure upon the large venous cavities or trunks; thus obstructing the free return of blood to the heart. The presence of fluid in the pericardium, by interfering with the free dilatation of the auri-

cles and ventricles, no doubt contributed in inducing this exudation of serum from the extremities of the veins.

In referring to the treatment of this case, we cannot fail to remark the small amount of influence exerted over the disease by the most active remedies. Repeated bleeding, blistering, purgatives, digitalis, &c., appeared to exert but a very slight salutary agency. Nor did the disease begin to subside, until the mercurial influence was fairly established. It then gave way promptly and decidedly. The absorbent system being aroused into action, rapidly took up the serum effused into the pericardium and cellular structures, and the kidneys under the influence of the digitalis promptly expelled it from the system. The patient was now decidedly convalescent, the inflammation and its consequences were quickly removed; exhibiting another instance of the energetic action of mercury on the diseases of serous membranes.

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ART. X.—*A notice of the Epidemic Sore Throat as it appeared in Salem, N. J., and its vicinity.* By J. GIBBON, M. D.

SOME sporadic cases of the disease which forms the subject of this notice were observed during the latter part of the summer of 1844. It did not appear prominently as an epidemic, however, until late in November, from which period until the close of the winter it prevailed extensively in this neighbourhood. It resembled, in its general character and symptoms, the affection described by Bretonneau under the name of diphtherite (the cynanche maligna of another nomenclature).

It generally commenced with a slight soreness of the throat, accompanied by more or less cough, redness and swelling of the tonsils, uvula, velum palati and neighbouring parts. As the disease advanced the pain and difficulty in swallowing became more manifest, and the tonsils more enlarged. Hoarseness soon followed, and this symptom, where the disease was permitted to pursue its course unchecked, was rapidly succeeded by the stridulous sounds of croup. The disease having, at this stage of its progress, reached the larynx and trachea, displayed all the symptoms of croup superadded to those of ordinary catarrh. Upon examining the throat externally the tonsils could be distinctly felt enlarged and indurated, though but slightly painful to the touch.

Excepting in a few cases, the constitutional symptoms were not severe during the first stage. Some few cases were, however, accompanied by high febrile excitement and symptoms of acute inflammatory action from the beginning. As a general rule, the system sympathized but little with the diseased organs prior to the formation of an artificial membrane upon

their surface. This occurred at various periods, from a few hours to ten days or two weeks from the commencement of the disease. The breathing now became laborious; signs of cerebral engorgement began to show themselves; and the symptoms resembled most accurately those of the second stage of croup. A false membrane blocking up the larynx, trachea and bronchi, and preventing the access of air and the oxygenation of the blood, was the cause of death in the fatal cases. In a few instances this membrane extended to the fauces. In the only post-mortem examination which the writer witnessed, made by his friend Dr. Thompson, the larynx, trachea and larger bronchi were coated with this false structure to such an extent as to preclude the possibility of respiration. As in croup, this membrane was frequently discharged in large quantities under the operation of an emetic. In one instance a portion of this membrane, partly dislodged from its original seat, was seen by the writer protruding like a tube to the extent of half an inch above the glottis, the immediate removal of which only prevented the child from suffocation.

The disease was most fatal among infants. Children above the age of two years generally recovered under timely and proper treatment. The recovery was, however, tedious—the redness and swelling of the tonsils remaining, in most cases, for two or three weeks after the violence of the disease had subsided. In many cases the enlargement of the tonsils still remained after the lapse of a month or six weeks. Not unfrequently the disease, after having almost subsided, would be aggravated by changes in the weather. An unusually damp atmosphere almost invariably aggravated the symptoms; while a few days of clear dry weather almost as invariably diminished the violence. Cases were observed to multiply rapidly after a few days of wet and rainy weather.

It was believed by some to be contagious; but its progress appeared more like that of an epidemic than a contagious disease. Scarcely a child in the neighbourhood escaped an attack at some period of its prevalence. The fact, too, of its prevailing in various parts of the country simultaneously with its appearance among us argues strongly against the probability of its having been contagious. Its origin may, with much greater probability, be traced to the agency of some peculiar influence generated by the open weather, and the constant succession of rains which characterized the past autumn and winter.

The disease, in the form above described, was confined exclusively to children. A modification of it, however, under the various forms of tracheitis, bronchitis, cynanche tonsillaris, &c. &c., was very prevalent among adults during the winter. These, as a general rule, were characterized by a minor degree of inflammatory action than is usually to be observed in their progress. They were also more tedious in their progress—partaking, in many instances, of the exacerbations and remissions which marked the course of the epidemic among children.

The treatment most successfully resorted to consisted of emetics frequently repeated, accompanied by external irritating applications. These were almost invariably successful when early and perseveringly used. As an external application, flying blisters of cantharides seemed the most efficient. In very young infants, and in older children where they were not resorted to at an early period of the disease, they frequently failed to relieve.

In these cases calomel and antimony were the most to be relied on. Bleeding, though in some cases it proved useful, was, as a general rule, of little benefit. Internal applications were also of little use. A great variety were resorted to by the writer. Weak infusions of cayenne, the capsicum gargle, the sulphate of copper, chloride of soda, diluted muriatic and sulphuric acids, alum, borax, &c. &c., were used with apparently the same results. If any one article was entitled to more confidence than another, it was a strong solution of nitrate of silver. After free puking, this seemed, in some cases, to mitigate the local symptoms. As applications to the enlarged tonsils which so frequently followed the disease, the solid caustic and the tincture of iodine seemed the most beneficial. There were many instances, however, where these enlargements continued for six weeks or two months after the violence of the disease had spent itself. The epidemic seemed to diminish in violence as the spring approached, and finally disappeared with the rainy weather of the season. There are, at present, no cases, so far as my knowledge extends, in this neighbourhood.

Salem, May 10th, 1845.

# REVIEWS.

ART. XI.—*Essays on Pathology and Therapeutics, being the substance of the course of lectures delivered by* SAMUEL HENRY DICKSON, M. D., Professor of the Institutes and Practice of Medicine in the Medical College of the State of South Carolina; 2 vols. 8vo, pp. 588–651. Charleston, 1845.

MODEST as is the title prefixed to the work of Professor Dickson, and notwithstanding he disclaims any desire that the profession should receive it as a complete and systematic treatise on the practice of medicine, its pages will nevertheless, be found to comprise a very interesting exposition of the pathology and treatment of the more important of those diseases which commonly prevail in the Middle, Southern, and Western States of our Union.

Although we differ from the author materially, in regard to many of his pathological views, and question, also, the correctness of a few of his therapeutical directions, we must, at the same time, concede to him the credit of having produced a work replete with valuable hints in respect to the character, causes, phenomena, and treatment of the several forms of disease the American physician is the most frequently called upon to treat, and in relation to which the accounts presented by European writers will seldom be found sufficiently full and accurate.

The work of Professor Dickson is not made up of a mere abstract of the facts and opinions of others; it may claim, in some degree, the character of an original treatise upon the subjects which it comprises. The author, while he has made free use of the materials furnished by his cotemporaries and predecessors, has so successfully combined these with the results of his own observations and experience—testing by the latter their true value and practical application—that the work is to be received less as a mere summary of the present state of medical opinion and practice, than as an exposition of the views and deductions derived from the author's own clinical observations, and in this light is to be viewed as an actual addition to the amount of our medical knowledge.

The first ten chapters of the work are devoted to a consideration of some of the leading points of general pathology, under the heads of causes, seats, tendency, and phenomena of disease. Marked, as these chapters unquestionably are, with much good sense and justness of observation, and presenting, as they do, a very fair outline of the subjects of which they treat, they constitute, nevertheless, a portion of the work which will be found more frequently, perhaps, than any of the others amenable to criticism. Upon many of the questions discussed much difference of opinion has heretofore existed, and still continues to exist, among pathologists; and in relation to not a few it will probably be long before we shall arrive, if we ever do, at any thing approaching to clear and positive conclusions. Even with this admission we believe that the deductions of the author are not always those to which the facts in our possession most obviously lead, but are occasionally opposed to the weight of positive testimony. His reasoning is not always as clear and conclusive as could be desired; and while he has

presented, in their full force, all those facts which appear to favour his own views, he has not in every instance, we conceive, done equal justice to the facts of an opposite character.

These remarks will apply more particularly to the chapters which treat of the exciting causes of diseases, especially malaria and contagion, and of the causes and history of endemics and epidemics.

The term malaria Professor Dickson, and we think from sufficient reasons, prefers to the more common term miasm or miasma. Although the accuracy of the concise account which he has given of the particular circumstances under which the vitiation of the air, implied by this term, most commonly takes place, cannot be disputed, there is but little force in the chain of reasoning by which he has attempted to sustain the popular doctrine, that the vitiation is caused by the admixture with the atmosphere of a poison, resulting from vegetable or animal decomposition.

Of the existence of this poison he admits that we have no other evidence than that derivable from "its morbid influences upon the living body." The chemist has examined, with the minutest care, the constituents of the morbid atmospheres in which it has been supposed to abound, but without being able, as yet, to discover by any test its existence.

"The known products of vegetable decay have been again and again experimented with, but to no purpose. Neither by eudiometrical applications, nor by the most perfect analysis, can any additional ingredient of a gaseous nature, either in a state of mere mixture or chemical combination, be detected in such air; and we therefore infer, that it is not carbonic acid, nor carburetted hydrogen, nor any other of the chemical compounds that conjecture has suggested."

So far extends the candid admission of our author—who still looks, however, to the aid of chemistry for the ultimate discovery of the supposed poison.

Had we sufficient space, or rather would a subject that has been so frequently and fully discussed, warrant our extending sufficiently the limits of this article, it could be readily proved, that precisely the same form of fevers prevail as often in situations in which neither vegetable or animal decomposition can be going on to a sufficient extent materially to contaminate the surrounding atmosphere, as they do in the neighbourhood of marshes or of shallow ponds of stagnant water. The notion that the poison generated in these latter situations is conveyed by the winds to a distance, as asserted by some, of many miles, it is unnecessary to examine until the actual existence of such poison is demonstrated.

The general facts in relation to the particular circumstances under which what have with propriety been termed malarious diseases are most liable to occur, and the means calculated to guard against their attack are very fairly and accurately sketched by Professor Dickson, notwithstanding he has attempted to enlist, often by a very compulsory process, all of them in the defence of his favourite position, of a specific poison the product of vegetable decomposition.

A concise but very sensible account is given of the contamination of the atmosphere by the products of animal putrefaction, and its agency in the production of disease—we cannot, however, believe with the author, that the atmospheric contamination here alluded to, is produced by any "deleterious substances produced or eliminated besides the gases which we can collect during the process.

Upon the obscure and much contested subject of contagion, as a cause of disease, the views of our author are neither very precise nor novel. Contagion he defines to be—

"A peculiar modification of matter given out by a *diseased* body, which possesses the characteristic power of generating, in a healthy body, when brought to act upon it, a condition of disease similar to that which produced it."

"The modes of action in which contagions exhibit their power are various:

"1. Some require a wound, into which matter, in a palpable form, is to be inserted by inoculation, or by application, where the cutaneous protective tegument has been abraded, as vaccine, herpes, tinea capitis, and perhaps measles.

"2. Some affect the sound skin, but demand circumstances favourable to a protracted application, as psora, syphilis, gonorrhœa.

"These assume the palpable condition,—the impalpable contagions exert a more extended and dreadful potency.

"3. The next class requires, generally speaking, confinement within a limited amount of air for a notable space of time, which air we suppose to be impregnated with the matter of specified contagion. Of this sort are typhus, hospital gangrene, erysipelas. This condition of confinement in vitiated air is favourable, doubtless, to all the forms of impalpable contagion, but is not necessary in more than a very few."

After noticing, in the 4th and 5th place, the distance at which contagions are capable of exerting, in the majority of instances, a morbific influence, and the agency of fomites in their preservation and extension, Professor Dickson remarks, 6thly,

"The most important, however, and injurious of all the modes of action of contagion, is its epidemic diffusion in the atmosphere. This diffusion may be to a greater or less extent, or exhibit a greater or less intensity, according to circumstances."

To a contagious matter widely diffused in the atmosphere the author would appear, indeed, to refer all epidemic diseases.

This theory of contagion is certainly a very comprehensive one; if it be correct, it will require that we should include in the list of contagious diseases not only those which are communicable by contact alone with the sick or by inoculation, but, also, those which are endemic in localities where the atmosphere is, from any cause, rendered stagnant and impure, as well as all those which are liable to prevail epidemically.

Professor Dickson appears to be perfectly aware of the objections to which his theory of contagion, particularly so far as it regards the supposition of its being the sole cause of epidemics is liable, and he has attempted to obviate the more prominent of these by a chain of reasoning, which is, however, any thing but satisfactory or conclusive. He admits the spontaneous origin of all the contagious diseases, even small-pox; but does not perceive that there is no more difficulty in accounting for the same mode of origin of an affection simultaneously in ten individuals than in one. From all that we know of those diseases which are unquestionably contagious, in the proper sense of the term, it would appear that the distance to which their infecting influence is limited, in a pure and unconfined atmosphere is extremely circumscribed; now it may be asked, what are the peculiar circumstances under which this influence becomes occasionally extended throughout the atmosphere of a wide extent of country, and, within a short period, enable it to pass beyond wide seas, and over high and extended mountainous chains, carrying disease and death to distant countries; traveling, in fact, as in the case of some of the epidemics of catarrh and the cholera, throughout the entire circumference of the globe?

But, as the author very candidly admits,—

"We know nothing of the conditions which sometimes limit scarlatina, measles, and small-pox, to the production of a few sporadic cases, easily traceable in most of the steps of their progress, and of the contrasted contingencies

which, at other seasons, give them wings as it were, and scatter broadcast the seeds of pestilence. But surely," he remarks, "it will not be required of me to produce proofs of the fact familiar to every physician, that such differences do occur, in the promptness, facility, and extent of the spread of contagious diseases, at different times. All the febrile *contagions*, except vaccine, are capable of being thus propagated,—hence they may be styled diffusive or epidemic."

But the question is not as to the liability of certain contagious diseases to prevail epidemically, but whether their extension, in the latter case, is the result of a specific contagion, produced by a peculiar morbid action of the animal organism, diffused in the atmosphere of the city or district of country in which the diseases alluded to suddenly appear and prevail, and by the spread of which, from atmosphere to atmosphere, these diseases are extended to neighbouring and remote situations.

Professor Dickson remarks, that with the exception of the influenza alone, and but partially even of this,—

"All epidemic and diffuse contagions have a limit in their association with cities, and other localities in which density of population, whether permanent or transitory, is met with. From city to city they spread by slow transmission and casual opportunity, being propagated from neighbourhood to neighbourhood, or traveling on the great channels of human intercourse—a road or navigable river, either with the bodies of the sick, or in fomites of diversified character, or by means of portions of what is called 'infected atmosphere.' This third mode of propagation is much dwelt upon by those who are unwilling to admit the contagiousness of particular forms of disease, and who prefer to ascribe such diseases to unknown and unimagined modes of contamination of atmosphere, rather than acknowledge the possibility of saturating any given body of air with contagious matter evolved from *a diseased subject*, as we find it often filled with the soft and fragrant exhalations from odorous substances, or the foul and mephitic products of decay and miasmatic fermentation."

Without stopping to show how little testimony there is to sustain the author's views of the manner in which diseases become epidemic, and the vast body of facts which stand in direct opposition to them, we shall merely remark, that it is far more consistent with sound philosophy to admit our entire ignorance of the cause of epidemics or even to refer them to some unknown and as yet unappreciable "morbid constitution of the atmosphere," than to adopt, with Professor Dickson, a theory which, instead of shedding light upon that wide and rapid spread of diseases which occasionally occurs, involves the whole subject in even greater obscurity.

The author very properly defines an *endemic* as a malady, "which occurring with special frequency in any one locality in a permanent way, proves the existence in that locality of an agency of a peculiar nature, whether known or unknown, efficient in its production." It is in this sense alone that the term should be invariably applied.

"Local epidemics have been often confounded with endemics, but are readily distinguished by reference to the permanency of the cause which gives rise to them, whatever it may be. Thus, yellow fever, which at a certain season of the year, is always ready to be generated in a fit subject at Havana and Vera Cruz, is occasionally, though rarely, *epidemic* at New York, Boston (?) or Philadelphia —in which places, when it occurs, it is singularly local, and confined to very narrow spots or infected districts! Typhus fever, pneumonia typhoides, dysentery may prevail at distant intervals in any community; and even diseases whose contagious power is undenied, as small pox, measles, scarlet fever, &c., sometimes spread so very generally through a dense population, as to have been regarded in the light of local epidemics."

That they do occur, especially the two latter, in a strictly epidemic form

without the possibility of tracing the great majority of the cases to one focus or even several foci of contagion, there can be no doubt.

Local epidemics the professor admits to be almost always attributable to some obvious cause, whose influence is limited to the situations in which they appear, and may be detected and pointed out upon a careful examination of all the concurring circumstances, such as the temperature of the season, the previous and present state of the weather as to dryness or moisture, the stagnation of the air from unfrequency of winds or tempests, the prevalence of particular winds of known or special quality, the deficiency, perhaps, and perhaps the superabundance of the electric fluid, the decomposition of vegetable substances by which a subtile and malignant effluvium is produced, recognized as marsh miasma or malaria, and lastly, animal putrefaction.

This removes, at any rate, the diseases when they occur as local epidemics from the category of those dependent upon a specific contagion disseminated in the atmosphere, inasmuch as this, according to our author, "has but one origin,—being the product of specific morbid action in contagious diseases."

*General*, that is wide spread, epidemics, we are told, "cannot be dependent for their origin upon the local influences just enumerated," inasmuch as "they prevail under every possible diversity of circumstance and situation, not only independently of, but actually bidding defiance to all known contingencies."

This very positive declaration of our author, he would find it very difficult, we apprehend, to sustain by a reference to any well established chain of evidence deduced from the accurate history of either of the more widely extended epidemics, especially such as have been closely observed in modern times.

Notwithstanding many of the views set forth by Professor Dickson, in the chapters devoted to a consideration of contagion, endemics, and local and general epidemics, cannot, certainly, be received as legitimate deductions from well established facts, or as successfuly removing the difficulties with which the subjects referred to are encompassed, these chapters are still deserving of an attentive perusal. They contain a mass of very judicious remarks, and even when the reasoning of the author does not convince it will be found to interest from its ingenuity and the good faith with which it is evidently presented.

A very sensible chapter follows on the seats of diseases. The ensuing chapter on the tendency of disease, commences with the startling assertion, that "the *tendency of all* the various forms of disease, is *essentially*, and in their own nature *to death*, death either of a part or of the whole body." Although we do not believe in the existence of what the older physicians, and even some few of the present day, denominate a *vis medicatrix naturæ*, still, our pathological observations have certainly taught us that the tendency of the vital actions, when disturbed by morbific causes, is to return to their normal standard—and we have thought, that even when the morbid action has been such as to cause to a certain extent a change in the structure—a disorganization of a part—when the integrity of the part was not essential to the life of the organism, there was a tendency in its organic vital actions to diminish the extent of the disorganization and return it to its normal structure. We fear, that if the invariable tendency of all forms of disease was unto death, the mortality of all diseases would be greatly and fearfully augmented—for we suspect that Professor Dickson would not be will-

ing to admit that the "fatal tendency" is, in every instance in which recovery takes place, arrested by a well timed and judicious employment of remedial agents.

He has himself shown the inaccuracy of the assertion alluded to, when speaking, in a subsequent chapter, on periodicity, he remarks, that "rubeola comes to a spontaneous termination, in the great mass of cases, increasing, attaining its acme, and subsiding within eight days," and affirms, with regard to variola, scarlatina and vaccine, &c., that they progress, grow worse, reach their height, decline and disappear at familiar times, with entire regularity, and under familiar circumstances.

The chapter on inflammation, irritation, and congestion, is a very excellent one. The author's remarks upon these several morbid conditions, are marked by good sense. His views as to their nature and relation are worthy of attention. they certainly appear to obviate much of the confusion and contradictions into which writers have fallen in relation to the morbid conditions referred to.

His remarks on the pathology of fever are not marked by any thing of a very novel character—he adopts the long established distinction of fevers into symptomatic and idiopathic. He however admits it to be

"Highly probable, that no cause of disease possesses such indefinite extent of impression, as to act at once upon more than a single part; and besides, it is consistent with all analogy, to suppose that every cause of disease is determined to, and fitted to act specifically, or at any rate, specially upon one organ or tissue. It follows, therefore, or it is highly probable, that all disease is, to speak with logical precision, local in its origin."

The author waives any formal investigation of the merits of the various theories of fever which have, from time to time, flourished and sunk into oblivion, and he attempts to build no new theory of his own. His observations upon the leading points connected with the pathology of fever, are replete with good sense—and although the entire accuracy of some of them may be disputed, we cannot but admit their general plausibility and practical bearing.

On the question as to the natural tendency of fever to run a certain course and to terminate "in the restoration of health"—and whether it is possible or proper to arrest or cut short its course—the author remarks:—

"I have elsewhere stated my belief, that the tendency of all disease was [is] to disorganization. But the cause which produces disease may be transient in its influence or in its application, or it is removed by some change of circumstances; it is originally somewhat less than mortal in its intensity, or its force undergoes diminution; the excitability on which it first acted wears out; the predisposition to which it was adapted, is altered in some mode; the system becomes habituated and then callous to its irritation—as a ball will sometimes remain quietly lodged in a part which it had inflamed severely. Owing to some one or more of these conditions, all amounting virtually to a removal of the cause of disease, it comes to an end (*causa sublata tollitur effectus*) before its natural tendencies are manifested in their ultimate result—before death or disorganization has occurred. It is thus we explain the apparently spontaneous restoration of health, every day met with, and so apt to be attributed to the vis medicatrix naturæ—the restorative energies of the constitution."

We quote the above sentence to present an example of the manner in which Professor Dickson disposes of the facts manifestly opposed to his favourite theories.

We at the same time approve of the caution which he urges upon the young practitioner, not to place so much reliance upon the tendency, in any

disease, to a spontaneous solution, as to neglect those curative means which experience has taught us are adapted to cut it short or to moderate its violence and thus promote, so far as is possible, its favourable termination.

The author's account of intermittent fever—its pathology and treatment—is full and accurate. Notwithstanding one or two hypothetical propositions of minor importance, it will be found to present an admirable summary of all the well established facts and conclusions in relation to its causes, character, and ordinary progress, and a judicious exposition of the therapeutical measures adapted to its several stages and varieties.

The important subject of bilious remittent fever is very fully considered by Professor Dickson—his remarks in relation to its pathology are, in general, sound, and his directions for its treatment particularly judicious, and evidently the result of ample experience. He places, perhaps, too little importance upon direct depletion by the lancet or locally by leeches and cups, in the early stage of the disease. His therapeutical remarks are, however, it is to be recollected, made exclusively in reference to the disease as it occurs in the southern states, where, probably, depletion is less readily borne by patients labouring under this disease than in the middle and more northern states. He is a strong advocate for purgatives in bilious fever.—They are, unquestionably, when properly selected, well timed, and skilfully managed, an all important remedy:—they should be early commenced with, and may be continued, at short intervals, so long as the evacuations are of an unhealthy appearance. But it is not all purgatives that are alike proper and beneficial in this disease; those which produce much griping and watery stools are decidedly injurious:—Professor Dickson enumerates calomel as the most valuable; its beneficial effects may be augmented by combining with it various other purgatives. The proper management of purgatives in bilious fever is of no little importance, and we felt disappointed that the subject has not been more fully treated by our author.

The following excellent remarks are deserving of close attention. Speaking of the measures proper to be pursued by the newly arrived immigrant or visitor, in order to guard against an attack of bilious fever, the author adds,

"I cannot denounce too strongly the measures recommended by some, of active purging, at intervals, of low diet, of occasional blood-letting, of confinement within doors, and last, and worst of all, of mercurial salivation. Instead of being in any degree preventive of fever, all these rather tend to bring the system into that irritable condition so generally associated with weak and low action, and depressed tone or vital powers, which renders it more liable to be impressed by that class of causes which we style exciting and occasional. Experience, indeed, the surest and most infallible test, has not only proved their absolute inefficiency for good purposes, but has shown clearly enough their evil influences."

Some good remarks will also be found, in the present chapter, on the employment of mercury in bilious fever, with a view to its specific effects—the cases in which this treatment is alone proper—the extent to which it should be carried, and the evil consequences to which, when improperly managed or when carried too far, it is liable to give rise.

Yellow fever, which, to a certain extent, may be considered as the endemic of several of our southern cities, and as occurring in the form of a local and very circumscribed epidemic in a few of the sea-ports of the more northern states, has excited more controversy in relation to its mode of production, its pathology, and its treatment, than almost any other disease of common occurrence. There is scarcely any particular in regard to its origin, seat, character, and remedial management, upon which there is to be found a perfect accordance of opinion among those who profess to have

studied it with the greatest attention. Professor Dickson has given certainly a very able account of the disease. He believes that it is the effect of a specific and peculiar cause, which, in certain localities, is permanent and always active, while in others it exhibits only an occasional activity; that the cause of yellow fever is efficient only during the hot months of summer and autumn; that the disease is contagious, in other words, that when it has been produced in an individual exposed to its unknown (atmospheric) cause, in the place where it exists, and at the season when alone it is active, it "becomes itself a generative centre productive of other cases, or of a morbid agent capable of producing them," and lastly, that the specific cause "is transmissible from any one centre to another, or from any one of its generating centres to a healthy locality," in two modes, "either by conveyance of a portion of atmosphere in which is diffused its undefined specific cause, as in the hold of a foul vessel, from any place where it prevails epidemically, or by the introduction of a sick body or any fomites imbued with its contagion."

That yellow fever may be generated by exposure to an atmosphere that has been rendered impure from the decomposition of animal and vegetable substances by the action of a high degree of atmospheric heat, has been proved by so many series of accurate observations as to place the fact now beyond dispute,—but that it is communicable by contact with, or by any contagion emanating from, the bodies of those affected with it, is a point, in proof of which, amid all the discrepant and contradictory statements that have been accumulated, we can perceive not the least evidence of a satisfactory and conclusive character—the weight of testimony being, in our opinion, decidedly opposed to the possibility of the propagation of the disease in this manner.

With the exception of his views in relation to contagion, which we cannot admit as well founded, the remarks of our author in relation to the circumstances and localities in which the yellow fever is generated and the individuals who are most liable to its attacks are accurate and interesting.

The usual phenomena of the disease, from its invasion to its close, and the several variations from its ordinary symptoms and progress, which occasionally present themselves, at different times and in different localities, are admirably delineated by Professor Dickson. The disease will readily be detected by any one who has studied with care the very striking and accurate description which he has given of it.

His remarks on its prognosis are deserving of close attention.

In regard to the pathological appearances presented by the bodies of those who die of yellow fever,

"It is in the stomach," Professor Dickson remarks, "we find the most uniform traces of disease. It is always inflamed, often in a very high degree; in this condition the smaller intestines usually partake, the duodenum especially." "Ffirth found the large intestines also in a state of inflammation, but this is not ordinarily or strikingly the fact. Pym, Peyre, and others speak of sphacelus of the stomach. This, if it ever happens, must be rare. I have never met with it, and my opportunities for examination have been numerous. None of our American physicians report any thing of this kind. Perhaps we may find in the following paragraph an explanation of such statements. 'I have seen,' says Dr. Physick, 'the inside of the inflamed stomach as black as the black vomit, resembling it in colour exactly. This colour differs very much from the dark purple of a part in a state of gangrene, and I have never observed any putridity attending it.' Erosions of the mucous coat are described by R. Jackson, Ffirth, and others. In one instance, and but one under my notice, some partial erosion with softening of this tissue occurred."

According to our author

"The liver does not present any constant appearances. In some it is soft, pale, and flabby; in others engorged with black blood. I have frequently found it in a natural state, as far as could be judged by the eye, and so say Ffirth and Jackson."

In the treatment of yellow fever, while the author admits that circumstances may call for the occasional employment of the lancet, the results of experience and observation are, he conceives, unfavourable to a general or even frequent resort to it. He urges the necessity of due caution and prudence in its use. "It is available only," he observes, "in the first stage of the disease, which rarely affords opportunity for its repetition." When resorted to, he directs the patient to be placed in a half erect posture, and from a large orifice, a sufficient amount of blood to be drawn at once to make a forcible impression on the system.

Professor Dickson prefers the cold bath to the lancet, he believes it to be "equally effectual in subduing morbid excitement and controlling irritation, without any positive expenditure of, or subtraction from the vital forces;" as often as the pungent heat of the skin and the restless tossing of the patient return, the cold bath is to be repeated.

After the cold bath, or in conjunction with it, calomel is the remedy upon which, in the majority of cases, the main reliance of our author is placed. He administers it in free doses, first as a cathartic, and subsequently, with the view of placing the constitution completely under its influence. He scarcely admits of any other remedies than the foregoing, excepting affusions upon the vertex and sinapisms to the epigastrium.

"As to the actual efficiency of this course," he remarks, "I am prepared to speak with confidence. In the whole of the practice in yellow fever which I have seen, I have not noted, nor do I recollect a single case, in which ptyalism was induced during the continuance of the first stadium or febrile paroxysm, which terminated fatally. Nor are examples wanting of an abrupt check being given by this means to the progress of the disease, after it had advanced into the second stage, new life being thus aroused in the prostrate constitution."

The whole of the author's remarks in relation to the treatment, based, as as they are, upon the results of extensive experience, and in repeated epidemics of the disease, during the last twenty-five years, are deserving of close attention. He has, in our opinion, underrated the value of direct depletion by the lancet and by cups in the early stage of the disease, and has, perhaps, rated rather high, the efficacy of the mercurial treatment; his therapeutical directions, nevertheless, are upon the whole, peculiarly judicious.

The chapter on catarrhal fever contains a very good account of the disease, and some very sensible directions as to its management.

The all-important subject of typhus and typhoid fever, is discussed in the ensuing chapter. After a few sensible remarks on the difference in type, assumed by the different fevers and febrile affections, and the particular circumstances under which one or other type is most apt to occur, the author enters upon the question of the contagious character of typhus fever, the affirmative side of which he assumes, and maintains it to be "susceptible of ample proof." Notwithstanding he asserts that typhus fever possesses the "power of self-propagation," he admits "that it is not to be doubted, that a certain favouring condition of atmosphere, known from the days of Sydenham, as its epidemic constitution, must, at times, exist, in order to account for its more ready extension, and wider and more violent prevalence. The definite nature or character of this äerial predisposition, favour-

able both to the generation and propagation of typhus, is not known: it is probably, the product of many concurring elementary agencies."

The remarks just quoted, we conceive to be perfectly sound and to be borne out by all the facts that have been accumulated in reference to epidemics of the fevers under consideration, but they are by no means, in strict accordance with the views expressed by the author in his chapter on contagion, endemics, and epidemics.

Professor Dickson treats of typhus and typhoid fever under the same general head, he being satisfied of the identity of "all the modifications of continued fevers, collected by writers under these names," and he is "persuaded that, the more closely the subject is examined, the more this opinion is destined to prevail."

In his excellent description of the disease, he first delineates the ordinary course of the fever, and then dwells shortly upon the signs of functional disorder attendant upon its progress, and the organic lesions discovered after its termination.

"We shall thus," he remarks, "perceive more clearly, how readily all the modifications of continued fever run into, and mingle with each other, forming a series inseparably connected together."

Our author's description of the course of typhus fever is sufficiently accurate, and although from this, it will be evident that all the forms have a tendency to run into, and mingle with each other; still, in practice, the distinction of typhus and typhoid fevers can be very readily recognized, while it is of no little importance in a therapeutical point of view. The objections of the author to the accuracy of this distinction are, certainly, far from conclusive.

He describes the disease, under the two forms of typhus mitior and typhus gravior—the latter of which is comparatively of unfrequent occurrence in the United States.

In regard to the pathology of typhus, Professor Dickson considers, that a peculiar affection of the head is fairly to be inferred, but of a character not "clearly definable."

"It is surely," he remarks, "not simple inflammation, for typhus is not phrenitis. Nor can it be merely congestion, for there is very often increased activity and a sort of excitement." "Inflammation of the brain and its membranes very often ensues in the progress of the cases, but this, like intestinal ulceration, is a consequence and result of fevers generally; that they are seen most frequently in those under discussion, happens, I doubt not, from their long protraction and from the striking impairment of the vital powers, whose energies constitute the best defence of the system against every mode of organic change."

It would occupy too much space to enter into an examination of the somewhat minute details given by the author in relation to the treatment of the various grades of typhus fever, nor would it be doing strict justice to him, to present a bare enumeration of the remedies he advises, without entering into some detail as to the particular circumstances in which they are indicated, and the proper manner of their employment. He is an advocate, in the mildest cases, for "a gently purgative course, persisted in for a few days, and modified in its details by a careful observation of its effects." When the heat and dryness of the skin are prominent symptoms—especially when associated with great thirst, a small, corded pulse. flushed face, red eyes and delirium—the cold bath he considers highly beneficial; even when the patient is too weak to bear affusion or

immersion, both comfort and advantage, he remarks, will be derived from occasional sponging with water, vinegar or ardent spirits.

In obstinate or protracted cases, the mercurial treatment is the one upon which our author places his chief reliance. His general therapeutical directions for the management of all the grades of typhus fever are judicious, while there is much good sense exhibited in most of the details of practice given in the chapter before us. The author underrates, probably, too much the efficacy of depletion, both general and local, in the early stage of many of the cases of typhus fever; he, by no means, however, proscribes it, and, in certain cases where an evident tendency to, or an actual occurrence of local inflammation exists, directs the employment of cups in the neighbourhood of the affected organ. His rules for the employment of stimulants when the occurrence of the stage of prostration requires their use are in the main excellent.

The ensuing chapter treats of pneumonia typhoides, one of the most severe epidemics with which our country has been visited, and in relation to the true character and treatment of which, the most contradictory opinions have been entertained.

Of all the numerous denominations affixed to this proteiform disease, our author has selected the one which has received the most general sanction of medical men in the southern and middle states. In a large majority of the cases which he has seen, in different sections of our country and at different periods, there has been an inflammatory affection of the thoracic viscera, associated with that impairment of sensorial energy, and morbid state of vascular action which we meet with in typhus gravior. The affection of the thoracic organs is not, however, invariably present, "in many instances," he remarks, "the fatal progress of the attack has been determined without any definite relation to local affections of any kind," while, in some of the worst and most malignant invasions of this epidemic, it is the brain and spinal marrow which are affected, in others, the throat; and "a third and somewhat numerous class" of cases are "altogether anomalous, probably depending upon a morbid impression simultaneously made upon the whole sensorial system in all its wide expansion."

We must confess, that to call a disease typhus pneumonia, in a considerable proportion of the cases of which the lungs are altogether unaffected, strikes us as not simply an absurd misnomer, but as calculated to mislead the practitioner in regard to its pathology and treatment.

The author considers that the proofs of the propagation by contagion, of the malady in question, are not clear.

"Nor do we know," he adds, "distinctly its mode of origin. It has certainly some relation to the sensible qualities of the atmosphere, as its dampness and coldness, and it occurs most obviously in those peculiarly exposed to these agents, especially if the exposure be protracted."

It is a singular fact that the pulmonary form of the disease is far more prevalent in the southern than in the northern districts of country in which it has appeared. The disease has been observed, also, to be, in the eastern states, much more violent and fatal in low, swampy regions, in the neighbourhood of bogs, mill ponds, etc., while, in the lowlands of the south, equally damp, and vastly more subject to malarious fevers, nothing of the kind has been noticed.

"The petechiæ on the surface, which were at first so prominent a symptom as to give both name and character to the malady under discussion, soon ceased to attract attention, and may be said hardly to have belonged to it when it reached

the country south of the Potomac. Yet, this was not merely the effect of modifying influences of climate, for they had, before this time, as it is affirmed, failed to exhibit themselves in cases occurring in the native localities of this strange pestilence."

A good account is presented of the ordinary form of the disease, as it occurs to the south, which is that of pneumonic inflammation or congestion, attended with general typhoid symptoms of more or less intensity. A brief notice is likewise taken of some of its singular anomalies.

In the treatment of typhus pneumonia Professor Dickson condemns the use of the lancet excepting "in attacks marked by a predominance of the tokens of obvious inflammatory excitement."

In the commencement of the attack he has been much pleased with the effect of the administration of an emetic, or an emetico-cathartic—excepting in cases of early prostration and extreme muscular debility. In these latter cases, he directs a resort at once to the moderately stimulating diaphoretics, as camphor, nitrous ether and the carbonate and acetate of ammonia, combined with opium in the form of Dover's powder, the efficacy of which means will be much aided by the application of heat in various forms to the surface of the patient and in pediluvia. Sinapisms and epispastics in the neighbourhood of the internal organ most affected, and to the extremities, are likewise recommended. When the strength of the patient begins to fail, stimulants are to be resorted to, and employed with a freedom commensurate with the urgency of the case.

The full and free use of opium throughout every stage, and in every modification of the disease, is spoken of by our author as a highly beneficial and even indispensable practice.

Professor Dickson has never had occasion to press the mercurial treatment to any extent in pneumonia typhoides; it has been, however, highly recommended by others.

A very excellent chapter follows on hectic fever, which is succeeded by one on syncope. The latter is, however, so invariably a symptomatic affection, and is of such secondary importance compared with the several morbid conditions of the system during which it is liable to occur, that we feel somewhat surprised to find it treated as a separate disease by so judicious a writer as Professor Dickson. When it occurs as a mere effect of mental emotion, it is ordinarily of such short duration as seldom to fall under the notice of the practitioner. The cases described by our author, in which there is a decided "determination of blood to the head," and the recovery from which "is apt to be attended by an unsafe degree of reaction," to control which "even the lancet may become necessary," are certainly not instances of syncope in the proper pathological acceptation of the term.

The account given by the author of angina pectoris, though upon the whole sufficiently accurate, is, in some few particulars, amenable to criticism. His views in regard to the nature of the disease will be found true, we apprehend, in relation to but a very few cases. He considers it to be a "functional disease of the heart itself, neither dependent upon a disordered state of the stomach, nor on a gouty diathesis"—"although each of these contingencies must be acknowledged to be among its efficient predisposing and occasional causes." Nor does he admit of its being necessarily connected with any organic change in the structure of the heart or of its vessels, though "it is found to be, in certain subjects, coincident with the presence of such changes." The views here stated are, we are told, based

"upon the occurrence of cases, in which, upon dissection, no morbid alterations of any organ or part could be discovered," and upon the fact that all other muscles are subject to cramp or spasm, while "there can be no reason alleged why the heart should be exempt from this general liability."

It would occupy too much space to enter into an examination of our author's explanation of the pathology of the disease under question, and to point out its fallacy. Those who would wish to study the question, in regard to the circumstances under which angina pectoris ordinarily occurs, and the frequency with which it can with propriety be considered as an organic or functional disease, will find it very ably discussed by Dr. Forbes, in the Cyclopædia of Practical Medicine.

Professor Dickson's directions for the treatment of angina pectoris are unexceptionable; they are but little influenced by his one-sided opinions in regard to its pathology.

The subject of hemorrhage is next considered. The account of the individual hemorrhages being preceded by a very admirable—condensed, it is true, but clear—examination into the general pathology of the spontaneous discharges of blood which constitute the hemorrhages of nosological writers, with some remarks upon their treatment. The author's account of epistaxis, hemoptysis, hematemesis, hematuria, hemorrhage from the mouth, gums, fauces and tongue, and intestinal hemorrhage, is tolerably full and accurate. Some few points in the pathology of these several affections, upon which recent observations have thrown additional light, are, perhaps, too briefly noticed; and one or more therapeutical agents of some value as means calculated very effectually to arrest the discharge of blood, are unnoticed.

The consideration of the dropsical affections follows. The author's general remarks on the subject of their pathology and treatment will be found replete with good sense and sound and judicious views. We do not believe, in any instance, that dropsy can be considered as a primary or idiopathic disease; but in the sense in which our author would appear inclined to admit of the occurrence of idiopathic dropsy, as a dropsy unconnected with any local organic disease, we see no great objection to the distinction. Dropsical effusion does occasionally occur in individuals labouring under great general debility, and, probably, an impoverished condition of the blood, independently of organic disease of the heart and great blood-vessels, or of either of the other organs—so far, at least, as we are able to discover—and in such cases the effusion may, without any very gross violation of pathological language, be denominated idiopathic.

Paracentesis is the only remedy to which we can resort, as a means of relieving the patient's sufferings and prolonging his life, in those cases where we are unable by our remedies to prevent or reduce the accumulation of fluid within the peritoneal sac, so that the abdomen becomes distended to such an extent as to impede respiration, to preclude the possibility of rest in the recumbent posture, and to endanger even rupture of the abdominal parietes. Under such circumstances, no physician would be warranted in abstaining from its employment. But, at the same time, we are to recollect that it is only a palliative, the effects of which are but temporary; and that it should not be too early resorted to, for, notwithstanding Professor Dickson considers it to be unattended with inconvenience or danger, our experience has taught us, that after each time the fluid is drawn off in this way, it again accumulates with increased rapidity, so as to render the intervals of the operation to be constantly diminished, while

in the numerous instances in which we have performed it in cases of ascites, we do not recollect a single one, when it was frequently repeated, where the patient was not destroyed by acute peritoneal inflammation.

The term hydrothorax, dropsy of the chest, Professor Dickson would restrict to cases of serous effusion within the chest, coincident with serous effusion elsewhere, either in the general cellular tissue, or in the cavity of the peritoneum. In such cases, the effusion within the thorax, "no matter though consecutive upon previous disease," he would regard "as idiopathic, because built upon the hydropic diathesis, an essential character of the history of true dropsy." Effusions *entirely local*, occurring as the result of previous inflammation in the part, and subsequent organic lesion, he "would refuse to consider as properly dropsical."

We see no important practical advantage that can result from the foregoing distinction, even admitting, which we do not, that any permanent accumulation of a serous fluid in the thorax ever does occur, without more or less effusion occurring in some part of the external cellular tissue.

The chapter on hydrocephalus or dropsy of the head, is one of the most unsatisfactory in the whole work. The author has evidently confounded dropsy, strictly speaking, of the brain, in which the serous effusion within the cranium is the most important circumstance, with certain forms of arachnoidal inflammation, particularly that connected with the development of tubercles upon the meninges and superficies of the brain, and in which the serous effusion is often very small in amount and always of secondary importance. Hence, there is a confusion in the remarks contained in the present chapter, some of them being applicable to one form, while others of them have reference to another and very distinct form of cerebral disease.

Even in relation to that form of encephalic disease, known among medical writers as chronic hydrocephalus, the account given by our author is particularly defective.

A short chapter is devoted to the consideration of scrofula. The remarks contained in it are excellent so far as they go; the author has not, however, gone very deeply into the pathology of that particular morbid condition of the system which gives rise to what are termed scrofulous affections, and has overlooked a large number of important facts that have been established in regard to many of the phenomena, the production of which have been referred to it.

The next class of diseases treated of are those of the digestive system. Under this head a very interesting and tolerable full account is presented of the milk-sickness; that singular form of disease, confined exclusively, so far as Professor Dickson is aware, to the Southern and Southwestern States of our Union:

"It derives its name from the fact, that as occurring in the human subject, it is most frequently met with as the consequence of eating milk, rendered poisonous by the diseased condition of the cow from which it was taken."

It never affects directly the human subject, but is produced on him exclusively by the use of the milk, butter, or flesh obtained from herbivorous animals labouring under the disease. Carnivorous animals are also liable to be attacked by it, if they eat of the diseased flesh.

It has been referred, among various other causes, to some unknown vegetable poison, confined in its growth to the fertile coves and deep rich valleys, where the disease occurs endemically. This hypothesis appears

to Professor Dickson to be favoured by the exclusive liability to the disease of the herbivorous animals.

"The accounts which have been given of this disorder from various sources, lead me," remarks our author, "to the belief, that it is a species of gastritis or gastro-duodenitis. Languor and lassitude are among the earliest symptoms of the attack, soon followed by nausea and vomiting, with great oppression at the epigastrium, and pain, with a sense of heat and burning in the stomach. The thirst is great; the skin soon becomes hot and dry: the eyes are red and suffused, and glassy, and, as some say, a peculiar odour is exhaled from the surface. The pulse is affirmed, by some, to be little changed from its ordinary condition, while others declare that it presents a frequency and tension resembling that of typhus fever, to which, indeed, the whole history of this remarkable disease, after the first stage is past, presents a striking resemblance. Patients recover slowly and imperfectly, remaining long after, and perhaps for life, subject to indigestions and other complaints of the stomach."

Professor Dickson presents nothing very satisfactory in regard to its proper treatment.

The chapters on colic and cholera, both sporadic and epidemic, contain very excellent accounts of these affections. But the author's opinion of the contagiousness of the latter is certainly not well founded. There is not upon record a single fact in proof of the disease being communicable from the sick to the well, while the testimony in proof of the non-contagiousness of the disease is ample and overwhelming.

Diarrhœa and dysentery receive the full attention their importance demands. In regard to the pathology of both diseases the author is, perhaps, somewhat deficient in details; he has, certainly, overlooked many of the important facts, derived from the observations of the surgeons in the employ of the East India Company, which tend to throw light upon the different forms in which the latter affection, especially, presents itself under particular circumstances and in different localities.

In regard to the treatment of both diarrhœa and dysentery, the directions of the author are, upon the whole, full and particularly judicious.

The chapter on cholera infantum is altogether unsatisfactory. The author has not succeeded in either describing the disease, indicating its true character, or pointing out its proper treatment. Of the facts recorded in relation to its morbid anatomy, he has taken no notice. That the cholera of infants is an affection readily distinguishable from the ordinary forms of diarrhœa to which they are subject, and is an essentially different disease from the dysentery of young children, must be evident to every one familiar with the affections incident to the earlier periods of life during the intense heat of our summers. We are inclined to believe, that, in a certain sense, cholera infantum is a specific disease; that is, a disease depending upon a particular lesion of the intestinal mucous membrane, and which occurs only once in the same individual.

The author has entered very fully into the consideration of the pathology and treatment of jaundice; his views are, in general, correct, and his therapeutical directions sufficiently minute and judicious. There is nothing, however, in his account of the disease of a novel character, or which demands particular criticism.

Under the very indefinite name of *sore throat*, Professor Dickson treats of the several inflammatory affections of this part. The pathology of these is very briefly discussed. The directions for their treatment are detailed with sufficient minuteness, and are in general such as are sanctioned by general experience.

The diseases of the respiratory system are next considered. The account of the pathology and therapeutics of the several affections of this class is preceded by a very succinct and somewhat incomplete inquiry into the methods in use for the exploration of the diseased conditions of the thorax. This is an all-important subject—attended with great difficulty to those who have had little practical experience in relation to it, even when it has been studied by them with the utmost minuteness and care; but utterly incomprehensible to those who have acquired but superficial views of the proper nature of the indications which the exploration of the chest is calculated to impart, and the signs by which these indications are imparted.

Croup is described as "one of the most common diseases of childhood." This is not strictly correct, for, though a frequent disease, it is by no means to be compared in this respect with a number of the other affections of infancy. Nor can it with propriety be considered, even "when opposed with promptitude and judgment," as "among those maladies over which the power of medicine exhibits *most clearly* its divine control." Genuine croup is a disease of a most dangerous character; the deaths annually produced by it in those situations where it prevails the most extensively, form a very prominent item in the bills of mortality. In Philadelphia, during the last year, 179 deaths are recorded from this disease, being rather more than one-fifteenth of all the deaths in children under fifteen years of age.

In regard to the author's remarks on the gastric origin of croup, founded upon the rapid solution of the symptoms upon "some crudities, such as green fruit or other improper ingesta," being brought away by the operation of an emetic—we should strongly suspect, that in some of the cases referred to in support of this opinion, the disease was not genuine croup, but laryngismus stridulus, which we have often seen suddenly removed in the same manner.

To Professor Dickson's exposition of the treatment of croup there can be no reasonable objection. The remedies he directs, when well timed and properly managed, are acknowledged by all practitioners to be those best adapted for the control of the disease. Tracheotomy (bronchotomy as our author terms it) is recommended in cases where suffocation is imminent. The success of the operation is, however, at best but doubtful. As to the cases and period of the disease in which alone it can be resorted to with any hope of affording benefit to the patient, some interesting facts have been recently developed by one or more of the continental physicians. These Professor Dickson has not noticed.

Bronchitis, in its acute and chronic forms, is very fully considered. The author's account embraces a synopsis of all the leading facts in relation to its pathology and treatment.

Pneumonia, pleuro-pneumonitis and pleurisy, are all treated of in a short chapter; the account given of each must necessarily be incomplete. The several forms of pneumonic inflammation—the accurate diagnosis and proper treatment of which are subjects of no little importance—demand that the inflammation of the structure of the lungs should receive a very full and separate consideration; we can, indeed, see no good reason for treating of pneumonic and pleuritic inflammations under one head. Their respective phenomena are certainly sufficiently marked to prevent the two diseases from being confounded, while their diagnosis is not a matter of indifference.

Phthisis pulmonalis is the subject of a very long and able chapter. If the author cannot be said to have exhausted his subject, he has presented,

except in regard to its diagnosis, a sufficiently accurate outline for the use of the student. The most important points in relation to consumption are, 1st, the accurate diagnosis between those forms of pulmonary disease that give rise to the general symptoms of phthisis, but which we are frequently able to remove by an appropriate treatment; and true tubercular phthisis, for the cure of which we have discovered as yet no remedy; and 2dly, the means of determining the earliest period of the development of tubercles in the lungs, when, it is more than probable, their progress may be arrested and the life and comfort of the patient prolonged. On neither of these points are the details given by our author sufficiently full and explicit.

A chapter on asthma—of many of the forms of which, of very frequent occurrence, the author has given no account—and another on whooping-cough, conclude the account of the diseases of the respiratory system.

The consideration of the pathology of the latter affection Professor Dickson dismisses with the following brief remarks:—

"The pathology of hooping-cough is obscure. There exists in the mucous membrane of the whole respiratory apparatus, a very peculiar irritability, morbid in nature and intense in degree, which gives rise to vehement paroxysms of convulsive cough, and is attended by, or productive of, an inordinate determination of blood to the organs affected; this, in its turn, results either in oppressive congestion, or a violent inflammation, with its disastrous consequences."

The diseases of the sensorial system are the subjects of the seven ensuing chapters. Insanity is treated of under the head of chronic phrenitis —But, although the author regards "chronic phrenitis as principally, if not exclusively, exhibiting itself in the various forms of insanity," still, he does not wish to be understood as asserting or implying "that every case of mental derangement depends upon, or proves the existence of organic lesion of the brain from inflammation of some part of its substance. This, he adds, although perhaps probable, and, as a hypothesis, consistent with the great mass of observed facts, is by no means so clearly made out, that it may be proposed to you as an established principle or doctrine."

Of the pathology of chronic inflammation of the substance of the brain we know but little; that little, nevertheless, shows that it has but a very slight connection with the major portion of the cases of insanity; too slight, at least, to warrant the foregoing remarks of Professor Dickson.

It would be unfair, however, to criticise very closely the views of the author in relation to the pathology of mental derangement; he having premised that they "are not sufficiently matured and settled to justify him in communicating them with any degree of confidence."

He has given, it is true, a very interesting outline of many of the leading facts in relation to the subject of insanity, interspersed with not a few sound and judicious remarks; his pathological deductions are, however, throughout, imperfect and one sided.

For the cure of mania-à-potu, the author points to opium, given in sufficient doses to procure speedily the sleep of the patient, as the remedy upon which our chief dependence is to be placed. We are convinced ourselves, of the very great importance of opium in the treatment of the generality of cases of the delirium of drunkards; it is a remedy, however, which requires some degree of caution in its use, and a nice discrimination of the cases to which it is adapted as the chief remedial agent. The plan recommended by some, and countenanced by our author, to give it in large doses at short intervals, "one, two, or three hundred drops of the tincture every

hour, until the patient becomes quiet or sleeps"—is one, we fear, that will as often eventuate in his destruction, as in the cure of his delirium. In many cases, the author admits, "it would be advisable to premise the lancet, a cathartic or emetic," before commencing with the opiate treatment. In a large number of cases, we should rather say the safety of the patient demands that the use of opium should be refrained from entirely; in many, a complete solution of the disease may be obtained by quietude and proper nourishment alone, or in connection with these by very moderate doses of opium. We are persuaded that in first attacks of the delirium of drunkards—especially in the young, or even in those which occur in persons who have for years been addicted to the habitual use of alcoholic drinks, when a strong tendency to congestion or inflammation of the brain exists, bleeding either from the arm or locally, from the scalp, by cups, is an important remedy, which cannot be neglected with safety to the patient. In the old and confirmed inebriate, with a broken down constitution, opium in moderate doses may, with propriety, be commenced with at once.

A very good account is given of apoplexy, palsy, chorea, and epilepsy, in the chapters devoted to their consideration, and a full and judicious exposition of their treatment.

In the chapter, also, on neuralgia, will be found a very interesting exposition of the leading facts and prevailing opinions in relation to those affections, the prominent feature of which is pain, often occurring in paroxysms, and of a most intense character, unaccompanied with inflammation or any appreciable organic change in the parts in which it occurs.

The pathology and treatment of rheumatism constitutes the subject of the next chapter. The generally received views in regard to its seat and character are advocated by the author, and the remedies ordinarily depended on for its cure are recommended.

The author denies the common connection between inflammation of the heart and its consequences, and external rheumatism.

"Let me distinctly declare my belief," he remarks, "that the frequency of this connection between ordinary rheumatism and carditis has been enormously exaggerated by certain modern pathologists."

This question must, however, be settled after all by statistics based upon an extensive series of careful observations.

Rheumatism, according to Professor Dickson, is, in the region of country in which he resides, "one of our most familiar maladies," and yet in a practice of a quarter of a century, he has seen and known but two cases of internal rheumatism.

The chapter on gout, although it presents a very good history of the ordinary form of the disease, and a correct exposition of the circumstances under which it most usually exhibits itself, together with a sensible summary of the plan of treatment best adapted for its prevention and cure, contains nothing new or particularly striking, either in regard to its pathology or therapeutics.

In the chapters which treat of the diseases of the excernent system, we are presented with an account of small-pox and the varioloid affections, vaccinia, rubeola, erysipelas, scarlatina and dengue. Although it may be questioned whether the author is correct in arranging all these affections as diseases of the excernent system, we have no disposition at present to enter upon the discussion of the true pathology of erysipelas, measles and scarlet fever. The author's account of the several affections just enumerated is, upon the whole, correct, while his directions for their treatment are in

accordance, in their general outlines, with the experience of the major part of the profession in this country as well as in Europe; of one or two remedies, upon which much stress is laid by a few respectable authorities, the author has taken no notice, and upon others he has not, perhaps, insisted so strongly as some of his readers may deem their importance requires. The accuracy of his leading indications will not, however, be disputed, and the therapeutical means he has indicated for their fulfilment, will be found, probably, as effectual as any of those he has overlooked or noticed without recommendation.

The account given by Professor Dickson of the dengue, is among the best we possess of that strange malady; which, during a few months, spread over the West India Islands and the neighbouring coast of the American continent, attacking almost every inhabitant of the places which fell within the sphere of its epidemic influence, and then ceased, and as it were became extinct; no regular or well defined case having occurred since the winter of 1828. The author published an account of the disease in question in this Journal for Nov. 1828, and subsequently, in Bell's Medical Library, for the year 1839; of this the chapter in the work before us is the substance; it is therefore pretty extensively known to the profession, and renders any notice of it on our part unnecessary.

The work closes with a short notice of the diseases of the urinary organs.

In the foregoing notice of the pathological and therapeutical essays of Professor Dickson, we have not attempted an analysis of their contents, our sole aim being to present to our readers some idea of their general scope and character. In a more extended review of the work, we might certainly have done more ample justice to the author by presenting, in stronger relief, those portions of it which merit particular attention, from the sound views they present in relation to the causes and character of disease, or the means adapted to its removal. In the brief notice we have given, we have, however, endeavoured to do full justice to the author's claims as a medical writer. When, upon any point of importance we have believed his teachings to be erroneous, his facts defective, or his deductions invalid, our opinion has been freely expressed; the more freely from our conviction that the work before us is destined to become a somewhat popular one with our southern and western physicians, and, from the character, influential position, and acknowledged talents of its author, to exert a very marked influence upon medical opinion and practice.

Had the work been presented as a complete system of pathology and therapeutics, it would not have claimed even so large a share of our attention as we have given to it; but, simply as a series of essays—in which are set forth the views and experience of the author in relation to the nature and management of the respective diseases of which they treat—we cannot but view it in a much more favourable light. It is unquestionably one that will be read with interest and not without considerable profit.

In his account of the character, seat, and causes of the several morbid affections comprised in the volumes before us, Professor Dickson has, in our estimation, laid himself more frequently open to criticism than in the views he has expressed in relation to the means best adapted for their removal. He has certainly overlooked and undervalued a large mass of the facts for which we are indebted to the industry of recent observers; and in his very just condemnation of the extravagant pretensions of many of the pathological anatomists—who would circumscribe the whole of pathology to the study of the appearances detected in the different tissues and organs

of the body after death—he has placed too little value upon the important light which may be derived from this source to aid us in our investigation of the true seat and character of diseases.

His practical indications are, in general accurate, and the means laid down for their fulfilment judicious. He is a stronger advocate it is true, for the "mercurial practice," and resorts to it more frequently than would be approved of by the generality of practitioners in the more northern states, whose experience has not taught them to expect from the practice the same amount of good as is attributed to it by him. He is also more sparing in the use of the lancet, as well as of local depletion, than would suit the views of the physicians in this vicinity, and is opposed to the employment of direct depletion in diseases and under circumstances where they would consider one or other to be strongly indicated, or even necessary to the safety of the patient. It is not at all improbable, however, that difference of climate and locality may so influence the character and progress of diseases, as to explain the opposite opinions entertained of bloodletting, and the other remedies recommended in their treatment, by physicians of experience and observation practising in different countries or in different portions of the same country. It is in this manner only that we can explain the discrepant statements made by members of the profession —of whose honesty we can have no doubt—in regard to the efficacy, in various affections, of the different remedial agents proposed for their cure.

D. F. C.

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ART. XII.—*Traité Elémentaire et Pratique de Pathologie Interne.* Par A. GRISOLLE, D. M. P., Médecin des Hôpitaux et Hospices Civils, &c., &c. En deux volumes, 8vo.: pp. 1724.

*Elementary and Practical Treatise of Internal Pathology.* By A. GRISOLLE, D. M. P. Paris, 1844.

So entirely has the attention of French pathologists for many years past been absorbed in the study of specialties, that they would seem to have found no time to sum up in a concise and manageable form the vast amount of information they have collected. Valuable monographs in abundance have been published, either in separate volumes, or in the admirable dictionaries or encyclopedias, which have issued from the French press, and which will be found to exhaust, as far as our present scientific knowledge will allow, the subjects upon which they treat. To the student, however, they are almost sealed books. He wants to know simply what are the facts of science; to have them classified and arranged in such a manner, that, at a single glance, he can master the results of the labours of other men, without having to search for them amid the theories and opinions of medical philosophers. So, too, does the general practitioner, who looks for conclusions and facts, and not arguments and theories. Neither of them have time to spend upon the latter. Yet strange to say, no work existed in France to which they could recur for a brief and clear exposition of these matters, and its want had begun to be felt.

M. Valleix was the first to attempt to meet the case, and in his "*Guide du Médecin Praticien*," a work of great merit, but which has not yet been completed, has laid before the profession an admirable practical treatise.

But the range of discussion is too great and extended for a mere manual, and, therefore, there still were room and a demand for such a work as we have suggested above.

At about the same period MM. Behier and Hardy, and M. Grisolle commenced the publication of treatises upon internal pathology, which might serve as manuals. The former, young men, scarcely known to science, but full of zeal and knowledge, entered hopefully upon their task, and have presented us with the first volume of their work, which certainly promises auspiciously for the whole. Our intention, however, in the present notice is not to draw comparisons between it and the finished work, of which we have placed the title above, but simply to endeavour to give some idea of the extent and character of the latter.

Had we selected among the younger men of Paris, one, whom from our acquaintance with his history and writings we should consider best qualified to present in a condensed and satisfactory form the whole science of internal pathology, we hardly think it possible to have named another than M. Grisolle. His habits of untiring industry, the admirable school of observation, founded by M. Louis, in which he has been brought up under the worthy master and friend M. Chomel, to whom he renders the homage of this work; his long connection, of fourteen years, with the Parisian hospitals; the fairness, liberality and ability which have characterized his previous writings, all pointed to him as a fitting person to carry successfully through such an undertaking. With such an opinion of the man, we now propose to examine how far he has fulfilled expectations, and to endeavour to show what rank in medical literature his book should hold.

In his preface, he lays before the reader his motive for entering upon this undertaking, viz., his desire to fill the void occasioned by the want of a work which summed up faithfully the principal discoveries in internal pathology. Conscious of his own defects, but filled with zeal for the task he had entered upon, having carefully examined the best authors, and subjected their conclusions, when it was possible, to the test of his own experience during his connection with the hospitals, believing fully that the only method of arriving at fixed results, consisted in the adoption of the analytic and numerical method, as exhibited in his previous works, and determined to make that use of the materials within his reach, which his independence of position and truth enabled and required him to do, M. Grisolle disclaims any intention of willingly overlooking the writings of any of his fellow-labourers in the same field, where these writings consisted of any thing but mere theoretical opinions.

Having thus defined the position he intended to occupy, M. G. proceeds to state that he has distributed into nine distinct classes, all the diseases properly comprised within the limits of internal pathology: viz., 1. Fevers. 2d. Diseases consisting in a change in the constituent proportions of the blood. 3d. Inflammations. 4th. Morbid secretions. 5th. Poisonings. 6th. Lesions of nutrition. 7th. Organic transformation and accidental morbid productions. 8th. Neuroses. 9th. Diseases peculiar to certain organs. He has adopted this classification only after mature reflection and much consultation, without, however, believing it to be free from objection, or that it is possible, at least in the present state of medicine, to establish any system which will have the regularity and precision of those in other branches of natural history.

Special pathology is the exclusive subject of this work, M. G. referring the reader for extended views on general pathology and semeiology, to

other treatises, and especially to that of M. Chomel, "a work which is, without contradiction, the most remarkable introduction we possess to the study of practical medicine." M. Grisolle hopes, however, that although he addresses himself especially to those entering upon the career of medicine, he may have also written that which will be equally useful to practitioners.

We are thus brought to the consideration of the first class of diseases, fevers; diseases of which the number gradually diminishes in proportion as the progress of science develops new means of distinguishing between the primitive or essential, and the consecutive or symptomatic forms. That there are fevers of the former kind, in which the febrile movement appears to constitute the whole affection, with which divers alterations, both of the solids and fluids, may co-exist, but almost always consecutively to the fever, and insufficient to account for it, M. Grisolle does not, for one moment, doubt; but at the same time he recognizes, as he had previously done in his observations on pneumonia,—so often observed to occur in the course of febrile attacks—the important pathological law established by M. Louis, as the result of numerous observations, that the prolongation of a fever may become a cause of more or less profound lesions in many of the viscera,—the number and extent of these being proportional to the intensity and duration of the febrile movement.

Our author divides fevers into five distinct kinds: 1. Continued fever, comprehending seven species; the ephemeral, the inflammatory, the typhoid and European typhus,—the only kinds observable in the climate of Paris,—the typhus fever of the English, the bilious fever of warm climates, the yellow fever and the Eastern typhus. 2d. Eruptive fevers; variola, varioloid and varicella, rubeola, scarlatina and the *suette miliaire*. 3d. Intermittents, benign, pernicious and anomalous. 4th. Remittents, or pseudo-continued, "which might, perhaps, rigorously be considered as a simple variety or sub-genus of the intermittents;" and 5th. Hectic, slow or chronic.

The term typhoid fever is used by M. G., as by recent pathologists generally, to designate that form of disease which has for its peculiar lesion the swelling and alteration of the intestinal follicles, and of the corresponding mesenteric glands, because, without determining any thing relative to its nature, it is sufficiently significant of its most important train of symptoms. Although the characteristic lesions of typhoid fever are certainly inflammatory in their nature, they have not the power, when they are the only evident lesions, of augmenting the quantity of fibrin in the blood, as the phlegmasiæ have; a circumstance which M. Grisolle considers remarkable, and which shows that this disease is properly retained among the essential fevers; for MM. Andral and Gavarret have clearly shown, by their experiments, that in it, as well as in the other essential fevers, the amount of fibrin either remains normal or is diminished, the diminution, when it occurs, coinciding with the setting in of what are commonly called typhoid, or a low form of symptoms. The prolonged duration, one of its most remarkable features, and an examination of the blood, are consequently among the most important elements in its diagnosis, where other symptoms are doubtful; nor should it be forgotten how important it is to be able to form a satisfactory diagnosis of this disease, for it is always serious, however light the attack may appear, from the liability to intestinal perforations, which are always possible, even during apparent convalescence, and almost necessarily fatal.

That this disease is contagious, does not, in the opinion of M. Grisolle,

admit of question, particularly since the publication of M. Gendron's paper upon the epidemics of small localities; still, it must be admitted that this mode of propagation is much less evident, says the author, than in many other diseases, and that cases of spontaneous origin are far more frequent than those which result from contagion; a proposition which M. Gendron doubts. The treatment of this disease is eclectic, and is mainly that recommended by MM. Chomel and Louis, to whose valuable works the author is indebted for the groundwork of his article. The cool manner in which he speaks of his experience in regard to the different modes of treatment which have been recommended in typhoid fever, is certainly characteristic of the modern French schools of therapeutists, who seem to consider human beings as fitting subjects for experiments, sometimes of the most dangerous kind.

Typhus fever, or the European pest, which, until the suggestion of M. Chomel in 1834, of its probable identity with typhoid fever, has been regarded, and is, by most medical writers, still considered, as an independent and separate disease, has, according to M. Grisolle, been proved to be entirely identical with typhoid fever, by the valuable publications of M. Gaultier de Claubry, (t. 7, *Mém. de l'Acad. de Méd.*,) and the excellent account given by M. Laudouzy of the typhus in the prison of Rheims in 1839 and '40. Without entering upon this interesting question, which is now exciting much attention, we will content ourselves with giving the opinion of M. Grisolle, which is thus expressed.

"In fine, there is complete identity between the typhus and typhoid fevers, in their anatomical lesions, their symptoms, their march, the forms of the disease, their contagiousness, and the immunity after a first attack. I repeat, there is not any capital difference between these two affections, but merely shades of distinction, due, without doubt, to the unfavourable circumstances under which typhus is developed. M. Laudouzy is, I think, wrong, in the presence of the facts he has so well observed, to deny the *identity* of the two diseases, and to believe them to be only *analogous*. Such an opinion is not admissible; and is, besides, amply refuted by the very observations of this distinguished physician, the slight differences he has pointed out being, without doubt, due to the character of the epidemic."—I. 58.

The typhus fever of England and of this country, however, M. G. considers an entirely distinct disease, and one entirely unknown in France; the facts upon which this opinion is founded, are drawn from the able papers of Dr. Shattuck, of Boston, relative to the disease as he observed it in London, and of Dr. Gerhard, giving an account of an epidemic in Philadelphia, and of M. Valleix, who has made a valuable commentary upon the two papers named before, in an article in the 5th vol. (3d series) of *Arch. Gén. de Médecine.* M. Grisolle takes occasion here to speak in high terms of the ability of our countrymen, with whom he had enjoyed frequent opportunities of friendly and professional intercourse in Paris, and in whose faithfulness and intelligence he had the highest confidence.

We may, perhaps, not inappropriately here advert to some of the happy effects resulting from the visits of our young countrymen to Paris for the purpose of prosecuting their medical studies in that admirable school. A free intercourse has sprung up among some of the most intelligent of them and the ablest and most prominent medical men of Paris, for which they are indebted to their orderly deportment and assiduous attention to their studies, qualities which the Parisian teachers were not slow to discover, and of which they have shown their appreciation by placing within the reach of the students every means of improvement in their power. To

M. Louis are these acknowledgments especially due; he having ever shown himself the friend of the Americans, because he found them to be worthy of this confidence, and ever prepared to reciprocate his kindness by respectful attention and personal esteem. Working together with him in the *Société d'Observation*, of which he is the founder and perpetual president, and which, while it enrols among its members most of the prominent and most laborious younger medical men of France—among whom not the least distinguished is M. Grisolle—also numbers many young Americans; they formed intimacies with each other, by which the characters of all were subjected to the severe test of personal acquaintance and constant observation. These remarks are, to a certain extent, called for, to explain, in part, why M. Grisolle should have selected the paper of Dr. Shattuck, independently of its intrinsic merit, as the authority upon which his opinions of the typhus fever of England are founded. He knew his method of observation, and he could rely fully upon it. The same remark may apply to other members of that society, Dr. Gerhard, Jackson and Stewardson, whom he honourably quotes in the course of his work, with the firmest assurance of their accuracy, and in preference to authors of whom he knew nothing personally.

But to return again to the farther consideration of the work before us. A short account of the bilious fevers of warm climates is presented, not from any personal knowledge of them, but in order to avoid passing over a disease described by the English authors. The only distinction, however, he notices between this and remittent fever, is, that in the former the remissions are not constant, and that all authors agree that bark is detrimental in its treatment,—peculiarities which, if they really existed, are certainly not sufficient to establish a nosological distinction.

The chapter on Yellow Fever is based upon M. Louis's admirable work giving an account of the epidemic at Gibraltar in 1828, and the documents of M. Chervin on the etiology and mode of transmission of the disease. This work of M. Louis is certainly the most valuable we possess on yellow fever, and, indeed, is the only statistical account of it extant. But it is too apt to be forgotten that M. L. does not pretend to give a history of yellow fever, but simply of what he saw in that particular epidemic, and hence he is found fault with for making statements which he never uttered. As regards the anatomical lesion which he found to exist in every fatal case, the pale, anemic, yellow colour of the liver, and which, from the universality of its existence there, he supposed to be characteristic of yellow fever, other observers have stated that such is not the case at other times and in other places. Thus, M. Rufz, observing at Martinique in 1839–41, says that he found the liver unaltered in one case out of three, though M. Dutrouleau, a distinguished physician of the French navy, observing, in the very same epidemic at Martinique, confirms entirely M. Louis's statement, never having found the yellow liver wanting in 100 autopsies. Dr. Nott, in a paper in the last number of this journal, confirms the general conclusion of M. Rufz, that in Mobile the yellow liver is not always present. In view of this diversity of statements we must await farther observation to settle this interesting question.

Without deciding that yellow fever is not contagious, a view which he is inclined to adopt, M. Grisolle says that he is convinced that contagion is not the *ordinary mode* of its propagation,—persons who are subjected to the same causes being liable to take it, but not to communicate it to others who have not been so situated.

The pest, which seems now almost confined to the Turkish empire, is

described by the author in accordance with the researches of M. Bulard, who studied the disease in the Eastern countries, between the years 1833 and 1838. M. Grisolle thinks that weight of authority is in favour of its being endemic in the East—peculiar circumstances evidently existing there to account for its development—though M. Bulard is of opinion that it is always imported there; at the same time he believes it to be contagious, capable of being transmitted by fomites, thus calling for the strict administration of quarantine regulations by other countries having intercourse with the Turkish empire.

Commencing the account of the eruptive fever, we find an excellent description of variola and its kindred eruptions, vaccinia and varicella. The works of the most recent French authors on vaccinia, MM. Husson and Bousquet, furnish the materials for the views taken on many points by M. Grisolle. Among others, he believes with M. Bousquet, that the infection of vaccinia takes place during the period of incubation, the development of the vesicle being merely the consequence and evidence of infection; thus admitting that the vaccinia is already preservative by the third day at latest, and that consequently, good matter exists in the vesicle as soon as this appears, though from the minuteness of the quantity it is better to wait until the 6th or 9th day, before taking it from the vesicle. M. G. also prefers to use new virus taken within a short period, from the cow; as the vesicles are finer than those obtained from the insertion of some of the old virus. He does not consider that the necessity for revaccination is as yet proved; it being well ascertained that some constitutions are liable to a repetition of either affection, variola or vaccinia, when exposed to its contagion.

Rubeola is well described with all its peculiarities, as are also scarlatina, and the sweating sickness, *suette miliaire*, which M. Grisolle thinks should be placed in this class of diseases. As to the highly vaunted prophylactic powers of belladonna against scarlatina, he believes they are very doubtful, certainly far from being established. The valuable researches of MM. Andral and Gavarret in relation to the blood, are called in to sustain the classification of these diseases among the fevers; these observers having proved that the blood in them presents the same alterations as in the other pyrexiæ, viz., that there is never any augmentation of the fibrin, which most generally remains in normal quantity, though sometimes it is sensibly diminished, especially at the period of the eruption, while the globules either remain in normal quantity or increase in number: and that the blood presents no buffy coat when drawn unless there is some inflammatory complication, or in some cases of very confluent small-pox, when it may be found, but soft and gelatinous in its consistence.

Intermittents are the third kind of fevers noticed by our author. They are either benign, pernicious or anomalous, and are characterized by no essential anatomical lesion, as a point of departure; though they are extremely commonly attended by a concomitant alteration of the spleen, viz., its enlargement, which, in the benign form is an actual hypertrophy, with induration of its tissue, especially when the disease is prolonged, but in the pernicious form is at first a simple engorgement, the organ finally breaking down into a soft pulp as in grave fevers. This augmentation of volume is more frequent in the tertians and quartans than in the quotidians, which last, are, however, more common than the tertians, says M. G., from an analysis of some 160,000 cases observed in different countries, in the proportion of 9 to 1, while the quartans do not occur more than 2 or 3 times in

1000 cases. He says that "relapses are more frequent after attacks cured by febrifuges, than after those which have ceased spontaneously," still he considers it irrational to defer the administration of these remedies, and advises that a cure should be sought for as soon as possible. As to the antagonism supposed by Boudin and others, to exist between intermittent fevers and phthisis, M. G. considers it as being not only without foundation, but expressly disproved by the public documents published in England relative to the health of her troops in her different colonies.

M. Grisolle thinks that remittents differ from intermittents only in degree, and that the pseudo-continued fever described by M. Maillot as existing in Algeria, is nothing more than a modification of the same affection, assuming sometimes the intermittent, sometimes the remittent form, and not deserving a separate description. As to the pathology of remittent fever, M. Grisolle has adopted the opinions given out by Dr. Stewardson in this journal in 1841–2, opinions which are corroborated, says M. G., by the researches of Mr. Twining upon the Ganges, though these are wanting in precision. He remarks that these papers of Dr. S. contain the only precise pathological notions ever yet put forth upon the subject, though, as Dr. Stewardson admits, some facts are requisite before the universality of the appearances observed in such cases is fairly established. We may here observe, that in the number of this journal, for Jan. last, there is a paper from Dr. Swett, of New York, containing the results of his observations in the New York Hospital, which correspond entirely with the experience of Dr. Stewardson. M. Grisolle thinks that Dr. Stewardson is mistaken in considering the morbid appearances in the stomach as evidences of inflammation, although he would not positively assert that they are endemic, a degree of modesty which is certainly very becoming, considering that he himself never saw a single case of remittent fever.

With a brief notice of hectic fever, the author closes his account of the first class of diseases, which are in the main, very happily, though in general, summarily discussed. It must be recollected, however, that his accounts of these affections are the results of his examinations among French authors, and that for this reason all notice of English authorities, with the exceptions we have noted, is omitted, which is more to be regretted, because on many of these subjects, the latter are both more full and better informed than the French; though, perhaps, on pathology, or rather the morbid appearances presented in some of these diseases, there is but little satisfactory anywhere to be found.

A change (*vice*) of the proportions of the blood is the essential character of the second class of diseases. This change may consist either in the whole quantity of the blood, or in a want of proportion in the globules which are sometimes in excess, sometimes below the physiological standard. It may also be either general or local, according as it affects the whole mass of the blood, or only that portion of it which flows towards such or such an organ. Among the consequences of the former, are plethora and anemia. Among the latter, are those sanguine congestions and local anemias which are caused by the blood being conveyed in too great or too small quantity to the capillaries of an organ or part of an organ, without any appreciable change in the constituents of the liquid, thus differing from the general affection in which, whether plethora or anemia, there is at the same time, alteration in the quantity and in the constituent parts.

The state of plethora in which the blood is assumed to be in excess, though, as Andral says, there is no proof of it, may be either a physiological or a morbid condition; the only difference being that there is a larger number

of globules with less water than usual, the fibrin being still in normal amount. M. G. agrees with M. Andral, that this condition does not act as a predisposing cause to the contraction of inflammatory diseases. Sanguine congestion, or the accumulation of blood in greater than the normal quantity in some part of the body, may be either active or passive, and may sometimes disappear so rapidly in the last moments of life, as to render the fact of its existence very doubtful, even though there was the fullest evidence of its previous presence. After some excellent general remarks, M. Grisolle passes to the consideration of congestions in particular organs, beginning with the brain. He distinguishes two forms of it only, a benign and a severe form. When it kills rapidly, it is impossible during life, to distinguish it from apoplexy; but in the other variety, the rapidity with which even the most serious symptoms, as paralysis, delirium, &c., disappear, is a distinctive character of this affection and one of great value. As regards the application of leeches for the relief of this affection, M. Grisolle thinks that the prejudices against such a remedy arise from the fact that an insufficient number is generally made use of; and recommends that in cases where the congestion is consequent upon the pressure of a tumour, for instance, preventing the return of blood to the heart, the flow of blood should be kept up for 12 or 24 hours by means of successive applications of two, four, or six leeches. Our author is of opinion, that in the present state of science, there is no group of symptoms, which may be regarded as the effects of a congestion of the spinal marrow, there being an entire absence of satisfactory *post-mortem* examinations, and the existence of such an affection having been admitted solely by analogy.

The facts upon which the chapter on pulmonary congestion, whether active or passive, is founded, are derived from M. Grisolle's own experience. It may occur so suddenly and extensively as to cause instantaneous death, a statement which is corroborated fully by MM. Devergie and Lebert, the former stating that of forty cases of sudden death which he had observed, twenty-four were consequent upon pulmonary congestion either alone or with cerebral congestion. Extremes of temperature and especially the great heat of dog-days are causes of this disease. A similar remark corroborated by cases, has been made by a writer in the New York Lancet; viz., that instances of sudden death from pulmonary congestion are frequently met with during extremely hot weather in New Orleans.

As regards the passive form, M. Grisolle says that it is wrong to consider the engorgements of the lungs met with in *post-mortem* examinations after chronic disease, as being always cadaveric; he contends, and in this opinion M. Piorry agrees with him, that they commence in enfeebled subjects at a period somewhat remote from death, a fact which may be verified by percussion. These congestions, except in such cases, generally terminate in resolution; sometimes, however, the blood acts as a foreign body and causes inflammation,—this being one of the most frequent causes of the pneumonia so often observed in the course of very many cases of acute and chronic disease.

"It is impossible," says M. G., "to detect this condition when existing in the abdominal organs, except in the liver, spleen and uterus. Congestion of the liver, in most cases, depends on cardiac disease, which causes retardation of the course of the blood; it may, however, be primitive." He agrees with M. Andral, that these congestions may last for months or years, causing gradual wasting away, and thus giving rise to the suspicion of the existence of organic disease of the liver; from which, as hypertrophy, for

example, it would be difficult to distinguish it unless the fact of its rapid and sudden occurrence could be satisfactorily ascertained.

Congestions of the spleen must be frequent, as in its function it appears to be a sort of diverticulum for the blood; they, however, cause no trouble under such circumstances. When truly morbid, they are never primitive, so far as we know, occurring in the course of fevers and of severe diseases where the blood has lost a portion of its fibrin and tends to stagnate. Uterine congestions are briefly and summarily treated of in the concluding chapter of this first kind of diseases due to the *vice* of proportion of the blood. In the second kind, the blood is in less than its usual quantity, or rather there is, according to MM. Andral and Gavarret, a diminution of the globules, the other principles of the blood remaining unchanged, except when the anemic condition is rapidly developed from phlebotomy or hemorrhage, when the fibrin is also diminished. M. Grisolle is of opinion that chlorosis has been very improperly considered a distinct disease from anemia; authors distinguishing in the former the derangements of menstrual function as showing a difference. But, in truth, no such distinction exists, both exhibiting the same symptoms and march, requiring the same treatment, and being due to the same cause, *impoverishment of the blood;* a cause which is fully sufficient to account for all the functional lesions which have been brought forward and remarked upon, as constituting chlorosis, in contradistinction to anemia. As respects the advantage of marriage recommended in these cases, M. G. thus speaks:

"Marriage can only be advantageous when the cause of the chlorosis can be traced to crossing in love, and when the young girl is to be united to the object of her affections. It is clear that in this case, the satisfaction of the heart is far more effectual in restoring the health, than the sexual congress, which often acts rather as a debilitant than an excitant."—I. 192.

The third class of diseases noticed by the author are the inflammations. Attention is first directed to the subject of inflammation in general, of which the various symptoms, morbid secretions, &c., are passed rapidly in review. The researches of M. Dubois, of Amiens, relative to the microscopic appearances in an inflamed part, are adopted by M. Grisolle, who thus states them:

"In commencing inflammation, sometimes there is only acceleration of the capillary currents; afterwards in these, and at the beginning of all other cases, these currents are more or less manifestly retarded, and at a later period there is a more or less marked remission in the circulatory movement; the globules advancing by jerks, isochronous with the movement of the heart and then stopping, to advance again, until finally they entirely cease to move, after having exhibited less and less marked oscillatory movements."

The results obtained by MM. Andral and Gavarret from their experiments, as to the condition of the blood in inflammation, are adopted fully, viz., the fibrine is constantly and spontaneously augmented, the globular element exhibiting no change, although it may diminish, after debilitating treatment, while the albumen may increase in quantity. The first, however, is the only constant change, and is manifested in the formation of the buffy coat, which is alone met with in inflammation, in anemia, and in pregnancy. Its absence does not, however, indicate the absence of inflammation.

As in his work on pneumonia, M. Grisolle, while acknowledging that cold is the most common cause of inflammation, contends that its importance as a cause, has been much exaggerated, when resorted to, as it has

been, to account for the development of all inflammations of the pulmonary apparatus, for instance. As to the possibility of arresting inflammation, cutting it short, he, with Louis and Chomel, deny it entirely. It runs, say they, a certain course, which may, perhaps, be a little abridged by appropriate treatment, but cannot be arrested; an opinion confirmed by the observations of M. Andral, who shows that notwithstanding repeated bleedings, no matter how copious they are or how near to each other, the fibrin goes on increasing in quantity.

These preliminary considerations being concluded, M. Grisolle next enters upon the description of inflammation as affecting particular parts, beginning with the digestive apparatus. Stomatitis is first in order. This, in its different forms, and glossitis are carefully, though necessarily briefly, described. The same may be said of his account of angina, which is examined under the different forms of guttural and pharyngeal, tonsillary and pseudo-membranous.

Next in order, after a short chapter on œsophagitis, comes a disease, gastritis, which has made a great noise in the world, but is acknowledged to be now one of rare occurrence, and consequently most difficult to describe. M. Grisolle says, after denying the authority of the writers of the Broussaian school, who often saw gastritis when it did not exist,

"I repeat it, that in the actual state of science, inflammation of the stomach, as a spontaneous affection, is excessively rare, and no one has as yet been able to trace a satisfactory history of it."—I. 248.

Of softening of the stomach, M. G. says, that the red softening and those colourless ones surrounded by a bright injection, are the only forms which can be reasonably referred to inflammation; while the pulpy, gelatiniform and absolutely colourless softenings which arise under a great number of circumstances, constitute a distinct and peculiar affection.

"Finally," says M. G. "there is every reason to believe that the softenings of the gastro-intestinal mucous membrane, which, according to the admirable researches of M. Louis, occur so frequently in the course of all febrile attacks, when somewhat prolonged, have not, as their immediate cause, an inflammatory action."—I. 249.

Enteritis and colitis may be either acute or chronic, mild or severe, and dysenteric. As to the peculiar symptoms characteristic of duodenitis, as described by authors, consisting in pain at the umbilicus, felt some two or three hours after eating, the more frequent occurrence of bilious stools, in consequence of the irritation of the biliary ducts, or of jaundice from the obliteration of these ducts, M. Grisolle thinks they are entirely gratuitous, and except in rare instances, unfounded in facts. Inflammation of the colon and rectum, however, have positive and peculiar symptoms, though this disease rarely exists alone, the end of the small intestines being almost always simultaneously attacked.

The difficulty of diagnosticating severe enteritis in children between two and five years from typhoid fever, which has been so elaborately and satisfactorily shown by MM. Rilliet and Barthez in their admirable treatise on the diseases of children, is here adverted to by the author. It should be recollected, however, as must always be borne in mind in reading the accounts of these authors, that the children who are subjects of these remarks, were the inmates of a hospital, and consequently subjected to all the unhealthy influences of such a place of abode; that they are depraved in constitution, and belong to the most wretched classes of society.

Ulcerations in the intestines in chronic entero-colitis are exceedingly rare, says M. G., unless they are the result of the breaking down of tubercles, so that when we find entero-colitis attended with rapid emaciation by no means proportionate to the diarrhœa, and especially, when accompanied by regular febrile exacerbations, returning every evening, in adults, we should suspect the existence of intestinal tubercles.

Dysentery is next considered. Without denying its contagiousness, which he deems it impossible to do in the face of the authorities who have asserted its transmission in this way, M. Grisolle believes that this is confined to the epidemic form, or when it breaks out among persons living in extreme wretchedness and filth, and in crowded apartments; an opinion corroborated by the general agreement among authors, that it is by means of the emanations from the alvine evacuations, chiefly, or even solely, that it thus spreads. As to the treatment, M. G. contents himself with simply prescribing abstinence, mucilaginous drinks, baths, enemata, emollient cataplasms and opiates, when the case is not febrile and mild; where evidences of strong reaction occurs, he advises general and local bleeding. Evacuants, he says, were prescribed during the last century; but though successfully used empirically in some epidemics, he does not think that, as a general rule, they can be useful. Among these he places calomel and ipecac. in small doses. It does seem strange that the French physicians have such a dread of that *terrible medicine*, calomel, when it is so successfully used in England, Germany and this country, and particularly in the disease under consideration, combined with ipecac. and opium. M. Grisolle does not even hint at their usefulness in chronic dysentery. To be sure, the severe forms of this disease met with in tropical climates and in this country, are very rarely seen in Paris; nor have the physicians of that capital opportunities of treating the severe chronic form of it, met with among the seamen of England and the United States during long East India voyages.

M. Grisolle next studies the inflammations of the appendages to the digestive tubes. Parotitis is briefly noticed. Hepatitis is described with much care after the most recent publications of the French and English writers. M. G. agrees with M. Louis in thinking that the only sign which can by itself be considered characteristic of hepatitis, is the presence of pus in the organ, which pus is rarely infiltrated through it, but is collected in one or more abscesses, either on the surface or internally, and is almost always white, phlegmonous, and more rarely green or reddish, being in this case mingled with the detritus of the softened organ. The mode of opening of these abscesses into the digestive tube, into the chest, &c., and the consequences resulting from this cause, are carefully described. Indeed, this is one of the most interesting and well-digested chapters in the work; a work, it may be here said in passing, in which the vast amount of materials at the author's disposal have been most admirably summed up and condensed. M. Grisolle has no fear in this disease of mercurial preparations, after proper depletory measures have been resorted to.

Of the chronic form of hepatitis, says M. G., the same means of accurate description are wanting. As in the acute form, the presence of pus can alone warrant the belief in this disease; in this case it is always encysted, the membrane of the cyst being tough, and surrounded by indurated tissue. Of cholecystitis, which is the next disease treated of, nothing more than a mere sketch is presented, there being no certain means of diagnosis. The same may be said of pancreatitis, which rarely occurs,

and then only consecutively. Splenitis is apparently a rare affection, little respecting it, either symptomatically or anatomically, being known. M. Grisolle thinks that the only signs of its existence, anatomically considered, are pus and the infiltration of its tissue with a fibro-albuminous matter, circumstances which are very unusual, though change in the colour, consistence and volume of this organ are often met with in other diseases, independently of its inflammation. It is rarely a primitive affection, being generally the result of a traumatic cause, as a blow upon the left hypochondrium, and is characterized by constant pain, and the rapid occurrence of evidences of its increased volume, discoverable on percussion.

Of the inflammations of the respiratory organs, laryngitis first receives attention; it occurs under a variety of forms, viz., simple or mucous, stridulous or false croup, pseudo-membranous or true croup, sub-mucous and chronic. In this notice of laryngitis, we are presented with an admirable summary of the disease, containing all that is new or important in reference to its various forms. As to *œdema glottidis*, M. Grisolle agrees with MM. Chomel and Blache, that it is impossible to arrive at any satisfactory conclusion as to the nature of the attack, by carrying the finger into the mouth so as to touch the glottis. The spasmodic contraction of the throat, and the efforts to vomit provoked by such manipulation, entirely prevent the proper examination. The occurrence of œdema glottidis, which is a very grave affection,—only nine cases out of thirty-nine, collected by M. Valleix, having recovered,—can only be determined by a concurrence of symptoms; "as a feeling of obstruction at the upper part of the larynx, accompanied with hoarseness, a whistling inspiration, and soon with fits of suffocation, which cease and recur ordinarily at short intervals." M. Valleix has recently confirmed the opinion of Bayle, that œdema glottidis very rarely occurs in a state of perfect health, but most generally in the course of, or during convalescence from some febrile disease.

Chronic laryngitis is often met with, though many alterations have been pointed out as indicative of this disease, which are not properly so; among others ulcerations. M. Grisolle says,

"A more attentive observation has at length placed beyond question the fact that in almost every case, if not in all, ulcerations of the larynx are symptomatic. Thus in the acute state they are only observed in the course of glanders and typhoid fever, more rarely in variola, or after the use of tartar emetic in large doses; in the chronic state they are connected almost always with pulmonary tubercles; finally, in some very rare cases they are consecutive to syphilitic infection. Does it follow from this that ulcerations of the larynx can never be primitive? Though far from denying the possibility, I believe that this must be excessively rare; for in the numerous autopsies I have made during the last twelve years, I have never yet met with an example of primitive ulcerations, nor have I been able, among the writings which I have examined, to find a single well-authenticated instance of them. I will go so far as to say, that the seven observations which M. Trousseau has collected as examples of chronic laryngitis with essential ulcerations, are not conclusive; for although no pulmonary tubercles existed, it is not satisfactorily shown that these ulcerations were not the result of venereal infection. I repeat, therefore, that I do not absolutely deny the possibility of the occurrence of primitive idiopathic ulcerations; I merely say that they are rare, so rare, that when they are met with in the dead body, or are suspected in the living, the action of some of the preceding general causes must be suspected."—I. 314.

In the treatment of chronic laryngitis, great importance is given to the use of external irritation, and particularly, as recommended by MM. Trous-

seau and Belloc, the use of topical astringents and caustics, as the nitrate of silver, in strong solution, applied directly to the part.

Tracheitis is very rarely a simple disease, the inflammation usually extending either to the larynx or bronchi. Bronchitis is divided into acute and chronic forms; the first being either ordinary, capillary, or pseudo-membranous. The capillary form, corresponding with the suffocative catarrh of authors, has been well described only in modern times, especially by M. Fauvel, of whose admirable paper on this disease, published in the 2d vol. of the *Mém. de la Soc. d'Observation*, of Paris, an analysis was presented in the number of this Journal for July, 1844, p. 173.

After a brief account of the *grippe* or influenza, the author takes up the important subject of pneumonia, and presents the reader with an analysis of his now more extended work upon this disease at the different periods of life. The readers of this journal have already been placed in possession of the author's views upon pneumonia by means of an extended review of his work, published in the July number for 1843, p. 107, so that it is unnecessary to dwell upon the subject. There is one point, however, which we will not pass over, and that is, that the author has entirely omitted all allusion to the fact that mercurials are advantageously employed in this disease; an omission the more remarkable, as in his more extended work he spoke of their employment with alleged benefit. Indeed, so general and so useful, in many forms of pneumonia, which will not admit of the use of venesection or of tartar emetic, is the employment of calomel, or blue pill and opium, in this country and England, that it would appear incredible that no notice of the fact should be contained in a work of the character of that which is under consideration.

M. Hirtz, of Strasburg, we are told by the author, directs attention to the fact that when effusion first takes place in pleuritis,—the next subject of inquiry,—the liquid is extended in a layer over a large surface, causing an extensive *souffle* and dullness; and that then the liquid suddenly accumulates at the base of the thorax, abandoning the upper parts; the air tubes becoming then strongly compressed and flattened, no morbid sound is heard there, while the vesicular murmur and sonorousness reappear above, though, as M. Grisolle says, they are feebler there than on the opposite side; M. Skoda, of Vienna, supported by M. Fauvel, on the other hand, is of opinion that though the vesicular murmur is feebler, there is actually an exaggeration of sound on percussion. M. Grisolle says that it is a mistake to assert that œgophony is pathognomonic of pleuritis; for, as he has shown in his work on pneumonia, it is sometimes met with in simple pulmonary indurations in certain individuals, and especially old women, whose voice is naturally shrill and trembling. To be of diagnostic value, it must coincide with dullness, must be very decided and susceptible of displacement and modification in consequence of change in the position of the patient.

Chronic pleurisy is always serious because of its frequent coincidence with tubercles,

> "Pleurisy differing from acute pneumonia in this; that while pneumonia rarely stimulates the production and march of tubercles, such is not the case with pleurisy; for though this is often cured under these circumstances, it does not prevent, in proportion as the effused liquid is absorbed and the chest becomes narrow, the phthisis from generally making incessant and, at times, rapid progress."—I. 377.

Pericarditis may be suspected to exist whenever fever and dyspnœa are present without any apparent cause; a suspicion which may be made a

certainty by means of the usual physical examination of the chest. After combating it by antiphlogistics, and digitalis, says M. Grisolle,

"And there are evidences of effusion, the precordial region should be covered with a large blister, and suppuration from the blistered surface should be kept up. This is almost the sole treatment to be employed against chronic pericarditis; except that in cases where it is rebellious, a more energetic exutory, as a cautery, a moxa or even a seton may be substituted for it."—I. 384.

Endocarditis, whose importance and frequency have been much exaggerated by M. Bouillaud who first accurately described it, is rarely primitive, occurring generally in the course of some other acute disease, especially acute rheumatism. Its diagnosis is often extremely difficult. M. G. says,

"When an individual, who presents no sign of cardiac affection, is suddenly attacked with oppression and palpitation; when the heart is all at once augmented in volume and gives to the ear a sharp direct impulsion, whilst the sounds are masked or replaced by abnormal ones, endocarditis may with certainty be diagnosticated; under all these circumstances we must remain in doubt."—I. 388.

Carditis is very rare and presents no symptoms by which it may be suspected or recognized during life; nor is there any thing to characterize it after death but the presence of pus, which is rarely infiltrated, but is collected in abscesses.

Arteritis, thanks to modern investigation, is better understood. Redness is an insufficient sign of inflammation, and must coincide with some change in the tissues, as thickening, friability of the internal membrane, which is at the same time wrinkled, villous, rough, and more or less covered with fibrinous clots which adhere to it; coagulation being one of the most common though not constant accompaniments of inflammation. The most certain indication of inflammation is the presence of an albuminous pseudo-membranous exudation sufficient at times to obstruct entirely the calibre of the artery. M. Bizot thinks that the cartilaginous spots in the arteries, looked upon as evidence of chronic inflammation, are the remains of the albuminous exudation of the acute stage, which, not being absorbed, organizes, hardens, and acquires a cartilaginous consistence, the internal membrane disappearing and leaving this cartilaginous matter immediately upon the middle coat. The bony production is said to be merely the consequence of some perversion of nutrition due to old age and never to be the result of inflammation.

As with arteritis, mere redness is insufficient to characterize phlebitis, some lesion of nutrition being requisite to establish its existence. The vessel must also have a certain calibre, hence the impossibility of ascertaining the presence of capillary phlebitis. M. Grisolle, however, remarks that the inflammation of the capillary veins of the bony system may be suspected from a symptom which generally accompanies it, viz., purulent infiltration of the medullary membrane, especially marked in the spongy tissue of the bones.

"I have met with this lesion," says he, "in all the numerous patients whom I have seen die from inflammation of the veins after amputation of the limbs."—I. 397.

Uterine phlebitis, as described by Dance, and phlebitis of the cerebral sinus, after Tonnélé, are the subjects of special remarks, the author then proceeding to the examination of the subject of metastatic abscesses. M. Grisolle says there is no doubt that the pus may mingle with and change the blood, (its globules being discoverable there,) the blood becoming more diffluent and

like currant-jelly, while the bodies putrefy more rapidly. This alteration, which is always consecutive, causes the serious accidents of the second stage of phlebitis, and accounts for the morbid purulent deposits, which take place in the most vascular parts of the most vascular organs. Dance thinks that the vitiated blood may cause special disseminated inflammation attended with rapid suppuration, or, as Cruveilhier says, the non-eliminated pus may act as a foreign body, stopping in the capillaries, inflaming them and causing engorgement and abscess.

The diagnosis of superficial phlebitis is not difficult, but when it affects a deep-seated vessel, the only means of certainly ascertaining its presence are the symptoms due to the existence of general purulent infection.

"Thus, when in the course of a continued febrile movement which has lasted 7, 8, or 10 days, we observe irregular chills, delirium, prostration, jaundice, we should fear a purulent infection of the blood—fears still better founded, when articular pains are added and rendered certainty, when multiplied abscesses are developed in different parts of the body."—I. 402. "When the symptoms of infection make their appearance, the patient is destined to almost certain death; all means hitherto employed to prevent it having proved unavailing."—404.

Inflammation of the lymphatic system, vessels, and glands, next occupies the author's attention. We must, however, pass on to the consideration of the important series of diseases embraced under the head of inflammation of the nervous system, commencing with cerebral meningitis. This comprises the simultaneous inflammation of the arachnoid and pia mater, it being doubtful, says M. G., notwithstanding Abercrombie's inconclusive facts, whether or not the dura mater can be primitively inflamed. That it may be consequent to disease of the cranium, is placed without doubt, though, even in this case no symptoms absolutely indicative of it, have been observed.

Meningitis may occur under two principal circumstances: 1st, when there are tuberculous granulations in the sub-arachnoid cellular tissue: 2d, where nothing but the usual phenomena of serous inflammation are present. The latter form alone occupies attention in this chapter, though the two were, until a very recent period, confounded together. It is rarely general, and more usually occupies the convexity in adults, and the base in children. The symptoms, no one of which taken alone, is pathognomonic of this disease, are headache, delirium, coma, convulsions, strabismus, febrile excitement, &c., due rather to the impression the inflammation causes upon the brain, than to the inflammation itself.

"It is undeniable," however, says M. G., "that delirium is more rarely absent in the meningitis of the convexity of the hemispheres, than in that of the base; whilst the coma occurs more frequently, at least as a primitive symptom in that of the base, or still more decidedly, when effusion into the ventricles takes place." —I. 413.

This disease either terminates by complete and rapid (though sometimes slow) restoration to health, or by death, very rarely becoming chronic.

Rachidian or cerebro-spinal meningitis is only known from modern investigations, MM. Ollivier d'Angers, Calmeil, and Tourdes, of Strasburg, being the best writers upon it. The evidences of this inflammation are most frequently observed in the cervical portion of the spinal column, and circumscribed there, especially when caused by disease of the vertebra. In this latter case alone does it become chronic, causing adherence between the lamina of the arachnoid. M. Tourdes has observed cases in which it killed in a few hours, without giving time for the development of the cha-

racteristic lesions. In general, however, it is preceded by febrile excitement and violent pain in the affected region, irradiating towards the limbs and attended with spasmodic contraction of the muscles of the back, &c., which may be permanent or remittent, and extreme sensibility of the skin and symptoms of cerebral meningitis. Death, which is the most usual termination, comes on with epileptiform convulsions or from asphyxia; health very slowly returns when recovery takes place. Sometimes the result of cold, or of direct violence, at others having reigned epidemically in barracks, it is in the great majority of cases spontaneous. Antiphlogistics and mercurials with opium, which appear to have been occasionally useful, are the proper means of combating it.

Encephalitis, comprising inflammation of the cerebrum, cerebellum and protuberance, and myelitis, including that of the spinal marrow and medulla oblongata, are the subjects of the next chapter, and are discussed in a very clear and interesting manner. In a work, necessarily so condensed, there can nothing more be given than a summary of facts and opinions, without the possibility of citing authorities and approving or combating their views; the author, therefore, as in all other cases, merely alludes generally, at the commencement of his chapter, to the best authorities on the subject treated of, and acknowledges in general terms the use he has made of their labours; making use of established facts in science, without feeling the necessity of naming his authority, except where the fact is of recent discovery—his work being confessedly a compilation.

Coryza and otitis are next briefly studied, the author passing from them to the consideration of the inflammation of the secretory and excretory urinary organs, beginning with that of the kidneys. Simple acute and chronic nephritis, pyelitis and albuminous nephritis are the different forms which are passed in review, M. Rayer's great work affording most of the matter upon which the present accounts are founded. With regard to albuminous nephritis, which is carefully and admirably described in the condensed chapter before us, M. Grisolle is of opinion that cases of complete radical cure are *extraordinarily rare*, death being the almost constant termination of the disease, though temporary amelioration may take place. As the name given to this affection indicates, M. Grisolle has adopted entirely the opinion of M. Rayer as to its inflammatory character, making it a form of nephritis; he admits that it differs from other inflammations, in attacking both kidneys at the same time and in never going to suppuration; and he believes that the alteration of the blood in it is consecutive to the disease and not its cause.

Under the title cystitis, M. G. comprehends all inflammations of the bladder, reserving the term vesical catarrh to designate a peculiar, non-inflammatory, morbid condition either consequent upon previous inflammation or not, and characterized by exaggeration or perversion of the natural mucous secretion.

Of the inflammations of the genital organs, we find in this place only acute and chronic metritis, ovaritis and inflammation of the fallopian tubes and broad ligaments; the description of those of the vagina, urethra and glans penis being deferred until the author enters upon his account of the venereal disease, not that he means it to be understood that these inflammations are always the result of venereal infection, but because there are only shades of difference in the symptoms without any marked distinction.

Metritis is either acute or chronic, the latter being attended with engorgement and induration or with ulceration. M. Grisolle does not believe

that this chronic form ever degenerates into cancer, unless the woman is predisposed to it, though the disease may run on for years; the error having arisen from mistaking the first stage of cancerous hardening for simple inflammatory induration. The diagnosis is difficult, though it is not impossible. M. G. says:—

"The two diseases, however, may be distinguished from each other by bearing in mind that scirrhus is most generally limited to the neck, which is usually better circumscribed than in inflammatory induration; that the hardness of the engorgement, and the weight of the tumour are also much more considerable, and that pressure develops in it less pain. Finally the irregularities and knottiness of the scirrhous tumour, its dull white colour, and the hemorrhages which accompany it, will be so many characters which will serve to distinguish it from simple chronic engorgements."

As to ovaritis, M. G. says, that notwithstanding contrary assertions, he believes it to be quite common, independently of the puerperal condition and of pregnancy. The opinion that it may arise from blenorrhagia, like inflammation of the testicle in man, he considers to be sustained rather by analogy than proof.

Peritonitis may be either simple, acute and primitive, or chronic, or puerperal. Of the latter disease, his description is based entirely upon French authorities, corrected by his own observations. While admitting the epidemic constitution which extends its influence over women confined in their own houses as well as those in hospitals, M. Grisolle thinks there is neither demonstration nor probability of its contagious nature which has been maintained in England and in some instances in this country. He believes that no uniform treatment can be adopted in this disease, the peculiarity of the epidemic influencing this to a great extent. Contrary to the practice which has been so warmly sustained by some of the English and of our own writers, M. G., while asserting its almost universal usefulness, recommends bleeding being resorted to with great precaution and with the greatest reserve, even in cases where the disease announces itself with marked inflammatory characters; for a single, even moderate bleeding, says he, is often followed with prostration. He therefore recommends a small bleeding from 7 to 10 ounces, to be repeated if well borne, and to be assisted by the use of 20 to 30 leeches to the abdomen—when the pulse and strength admit it—followed by cataplasms and laxatives. When these means are inadmissible, recourse must be had to mercurials in repeated doses, until their constitutional effect is obtained.

Consecutive peritonitis, from intestinal perforation, for instance, and chronic peritonitis, which, like M. Louis, M. Grisolle has never met with unconnected with tubercles in the peritoneum, save in one case where they were found in the lungs, are the subjects of the next succeeding chapters.

Inflammation of the cellular tissue comprehends here the phlegmonous abscesses of the splanchnic cavities, the chest and the abdomen. Under this head the author sketches descriptions of phlegmonous abscesses in the mediastinum, around the kidneys, in the fossa iliaca, in the pelvic cavity and in the cellular tissue around the parotid. Inflammation of the muscular tissue, which is extremely rare and has even been denied to occur, is studied in the only two muscles in which it has been certainly recognized, viz., in the heart (see the chapter on carditis), and in the psoas muscle, where it has commonly received the name of psoas abscess, but is here called psoitis.

The inflammations of the skin next pass in review, under the general

heads of exanthemata, vesicles, bullæ and pustules. To the first of these belong erythema, roseola, erysipelas, pellagra and, perhaps, urticaria.

M. Grisolle directs attention to a symptom in erysipelas, which he says occurs in two-thirds of the cases as a premonitory, viz.:

"A painful engorgement of the lymphatic glands which receive the vessels coming from the part about to be attacked with erysipelas, although the skin presents as yet no appreciable modification of its colour, its thickness, its temperature or its sensibility. This engorgement of the glands, to which M. Chomel has particularly called attention, precedes the development of the erysipelas one, two or three days. We have even seen it precede the redness seven, eight or nine days. The number of the glands affected, their sensibility and swelling are generally in proportion to the extent and gravity the erysipelas will present; though to this there are numerous exceptions."—I. 534.

M. G. has never seen the glands suppurate, even when much swelled and very painful. He believes with M. Chomel, that erysipelas has never arisen simply from an external cause, or if this concurs in its production, its action is only secondary, being dependent upon some unknown internal condition, though it may hasten its development, or fix its seat. He thinks that all topical treatment, either with a view to limit the disease or to moderate the inflammation of the skin, should be abstained from, unless the tension and pain are very great, when a prolonged bath or a warm cataplasm may be resorted to. As to the application of a blister, which was adopted by Dupuytren, among others, to restrain or limit the disease, M. G. says, "it has no power either to restrict the erysipelas or to abridge its duration," founding his opinion upon the very facts he collected at the *clinique* of M. Dupuytren. He admits, however, that no harm was ever observed to follow its application for this purpose. Mercurial ointment is not any more advantageous, it being now ascertained, says the author, that most of the cures attributed to it, were solely due to the natural march of the disease. Indeed, considering all its circumstances, M. Grisolle is of opinion that the cutaneous inflammation does not constitute the disease, though he cannot agree with Rust that erysipelas is an exanthematic fever.

Herpes and eczema are the only vesicular diseases upon which the author treats in this place, referring for an account of psora to the diseases produced by parasitic animals, and of hydrargyria to mercurial diseases. Next come the bullar eruptions, pemphigus and rupia, and then the pustular, of which M. G. here speaks only of acne, mentagra, impetigo, ecthyma and favus, deferring his account of syphilitic pustules until he comes to speak of the syphilitic virus.

We have thus followed the author through the important class of the phlegmasiæ, and have now to consider with him the fourth class of diseases, viz., those due to morbid secretions, which are either the increase of a natural fluid, constituting a flux or collection, according as it makes its way outwardly or not, or the accidental secretion of an unusual fluid. He is induced to admit this class of diseases, because in the present state of our knowledge we cannot penetrate the nature of the disease, and cannot, therefore, do better than characterize it by its principal phenomenon, which may explain most of the accidents observed, and may become the source of the principal indication. With M. Chomel, he divides the morbid secretions according to the nature of the exhaled fluids into 1st, hemorrhages; 2d, serous secretions; 3d, mucous secretions; 4th, secretions of liquids peculiar to certain organs, as urine, sperm, milk, &c.; and 5th, pneumatoses or the secretions of elastic fluids.

Some good general remarks introduce the subject of hemorrhages. M. Grisolle agrees with M. Andral, that the defibrination of the blood becomes in a great number of cases the cause or the concomitant lesion of many sanguine discharges of a passive character, though not of all; thus, it is in those diseases which exhibit the destruction of fibrin that the greatest number of passive hemorrhages occur; an opposite state in which the blood is rich in globules, is also a cause of hemorrhage, but always of an active character, though it would be a great mistake to suppose that all active hemorrhages are due to an augmentation of globules. As to the treatment of severe hemorrhage, threatening death from want of sufficient blood to sustain life, M. Grisolle recommends having recourse to transfusion, which, while it renders the case no worse, gives a chance of life, which the experiments of Blundell and Brown warrant us in affording the patient, and, indeed, would seem imperatively to require us not to withhold.

An account of epistaxis is followed by a chapter on hemoptysis, which, though it cannot truly be said never to be essential, is in almost every case, at least, when at all abundant, symptomatic of an organic affection of the lungs or of some neighbouring organ, as the aorta or heart.

"When," says M. Grisolle, "the hemorrhage is consecutive, arising from external violence, or, what is more rare, forming the crisis of some serious disease, it is in general not dangerous; but these cases are exceptional, and we believe, that the existence af a hemoptysis should always occasion the greatest solicitude on the part of the physician; for almost all the persons who have had this accident, die sooner or later of phthisis,—not, as was long supposed, because the hemorrhage was the cause of the tubercle, but because it only occurred in consequence of the presence of these morbid productions. When the hemoptysis recurs frequently and appears to be constitutional, we should not feel completely reassured as to the cause which produces it—for we often see such individuals beget children, who all become phthisical, while they themselves die at an advanced age of some disease foreign to the lungs, and yet almost always present cretaceous tubercles in these organs. This is a fact, says M. G., which I have already several times observed."—I. 599.

We can only refer to the interesting chapters on stomatorrhagia, gastrorrhagia or hematemesis, and intestinal hemorrhages, which sum up admirably these important diseases, dwelling particularly upon the differential diagnosis of the hemoptysis and hematemesis, and upon that of idiopathic and symptomatic gastrorrhagia and enterorrhagia.

Of hemorrhoids which are next described, M. Grisolle says:

"We agree with MM. Bérard and Raige-Delorme. that in the immense majority of cases, hemorrhoidal tumours are constituted at their commencement by a venous dilatation; that the anatomical changes which occur during the progress of the disease have the greatest analogy with those which the same causes develop in varicose tumours of the leg. In a word, hemorrhoids are nothing else than varices of the veins of the inferior extremity of the rectum."—I. 612.

Hematuria, urethrorrhagia and metrorrhagia or menorrhagia are the subjects of succeeding chapters, which describe admirably all the practical points relative to these hemorrhages.

The serous membranes may be the seat of hemorrhages in which the quantity of blood effused may be very large and may undergo various transformations before being absorbed. Serious as these hemorrhages are, no positive signs reveal certainly their existence, which can, in general, only be inferred from the trouble they cause by the compression of some important organ, as the brain, heart, &c.

Meningeal hemorrhage is described after the admirable papers of MM.

Baillarger, Boudet, Rilliet and Barthez and Legendre. From their researches it is shown that the effusion always takes place within the serous membrane, and may be circumscribed or diffused over both hemispheres, it being either fluid or in clot, according to the period of death; if this is postponed for four or five days, the clot is even circumscribed by a false membrane, adhering always to the parietal layer of the arachnoid. Both the clot and the serosity may finally be absorbed, leaving only a false membrane with a serous appearance. In this case the hemorrhage is the consequence of a morbid exhalation, though it may succeed a rupture of a vein or sinus or artery at the base of the brain. Whatever its source, it excites, except in young children, a pressure proportionate to its amount. The diagnosis is difficult, it being impossible when it takes place suddenly to tell it from cerebral effusion or strong congestion.

"The existence of contractions from the commencement of the disease, the irregular march of the principal symptoms, such as the diminution and then sudden aggravation of the coma and paralysis, finally the gradual augmentation of the symptoms, are the principal circumstances by which we may establish the diagnosis of the disease."—I. 636.

The prognosis is exceedingly grave, "it should be regarded as still more unfavourable than that of cerebral apoplexy itself." It kills in a few minutes, or more commonly in four or five days; though patients have lived months and some have recovered. It is frequently met with among the insane, and particularly among those labouring under paralysis and dementia; it may occur at all ages and appears to be one of the causes of asphyxia neonatorum.

Hematidrosis or bloody sweat is the subject of a short chapter, which brings the author to the consideration of interstitial hemorrhages or apoplexies, meaning thereby effusions of blood taking place suddenly and spontaneously in the substance of the organs or tissues.

Cerebral hemorrhage is first taken up; M. Grisolle remarks that in the present state of our knowledge, the opinion that special signs indicate the portion of the brain into which the effusion has taken place "is not justified by numerous facts, and that the authors who have pretended to find some such diagnostic signs have merely invoked isolated facts, or have relied upon insufficient physiological data."—I. 644. M. G. does not think that hypertrophy of the left ventricle of the heart is an active predisposing cause of cerebral hemorrhage. Much pains are taken by the author to point out the distinctive marks of this affection so as to distinguish it from congestion, softening and meningeal hemorrhage; as to the last M. Boudet states, from the examination of a large number of cases, "that effusion of blood into the arachnoid immediately causes contraction, whilst in a cerebral hemorrhage this symptom comes on only after the development of consecutive softening around the apoplectic cavity."

But few examples of hemorrhage of the spinal marrow have been published. It is liable to be confounded with its softening, and the means of diagnosis are pointed out by the author when considering this latter disease.

In all the cases of pulmonary apoplexy (more than 20) which M. Grisolle has observed, there existed different organic diseases of the heart and particularly contraction of the orifices of the left cavity. Hypertrophy of the right ventricle has been said, though wrongly, to be a cause of this affection; for in 27 cases collected by M. Louis, not one ever had pulmonary apoplexy, though in 6 of them there was also hypertrophy with dilatation of the pulmonary artery and of its principal divisions, proof that the

blood had been thrown out with a certain amount of force. Thus, pulmonary apoplexy, symptomatic of disease of the heart, is not caused actively by an unusual impulsion of the blood, but passively in consequence of an obstacle on the left side of the heart, causing stagnation in that organ and consecutively in the lungs. Other apoplexies of the abdominal viscera, of the placenta, of the muscles, and of the heart are briefly noticed, and the whole subject of hemorrhage is concluded by a chapter on purpura and by one on scurvy.

The second kind of morbid secretions or secretions of serosity, next passes in review. With Rayer and Littré, our author confines the term dropsy to serous effusion into the cellular tissue or into the serous sacs, distinguishing these from the effusions into the mucous cavities, as the stomach, uterus, &c., and from certain cysts which have been confounded with dropsy. As to the causes of dropsy, some cases are shown to arise from a change in the blood, sometimes of its quantity, more often of its quality, a defibrination and diminution of the globules, though these last do not frequently or necessarily occasion it. Dropsy seems, however, to be a necessary and almost inevitable consequence of a diminution of the albumen in the serum; a fact perfectly established by the recent investigations of M. Andral. He even doubts whether there are any other dropsies by alteration of the blood, except those resulting from the diminution of the fibrin. Anasarca is first studied by M. Grisolle. Then comes œdema, differing from the former simply in the infiltration being confined to a portion of the body, and deriving its importance from the fact that it is symptomatic of some lesion in the neighbourhood, or at a distance, which thus betrays itself. The œdema of new-born children, which is very rare in city practice, though very common among children in hospitals, and most frequently caused by cold, differs in no respect from other œdemas. The author remarks that M. Charcellay, having found on the bodies of children who died from it, the characteristic marks of Bright's disease of the kidneys, asserts that "the œdema of new-born children is very frequently the result of albuminous nephritis." The observations of MM. Valleix and Billard, however, show that this is only an exceptional cause. These latter authors consider it as an entirely distinct affection from induration of the adipose tissue, which they look upon as merely a cadaveric phenomenon; or if it does occur during life, as coming on only during the last hours and when animal heat is already almost gone. "Thus MM. Billard and Valleix have very often ascertained that children several hours dead and still in their cradle, had their limbs soft and pliable, when, upon examining them the next day in the amphitheatre, they found them hard."—p. 689. We may here remark that in the work of MM. Rilliet and Barthez on the diseases of children (vol. i. p. 739) are reported two cases of hardening of the cellular tissue, coming on under precisely the same circumstances as œdema, and resembling it except in the hardness. The cellular tissue after death was hard and resisting to the scalpel, and consisted of perfectly distinct fatty lobules, separated by partitions thick and fibrous in some parts, more delicate in others; the fatty matter itself being red and firm, and giving out, on being cut, some drops of serosity.

Phlegmasia alba dolens is next studied. M. Grisolle considers this a very rare disease, and entirely doubts the authenticity or rather relevancy of the cases said to have been observed in the male. The only constant lesion he has met with, is the œdema or infiltration of the cellular tissue, occurring under circumstances as yet not satisfactorily determined. When phlebitis is observed with it, it is merely a secondary lesion.

Acute *sur-aigüe* and chronic hydrocephalus and hydrorachis are the forms of cerebro-spinal dropsies here examined, the consideration of cerebral œdema being postponed until the author comes to the study of that form of mania called *stupidité*, of which M. Etoc considers it to be the characteristic lesion.

M. Grisolle is of opinion that in the present state of science, the only essential dropsy of the meninges or brain, which should be admitted, is that described under the names of serous apoplexy or *sur-aigüe* cerebral dropsy; meaning thereby "a disease characterized anatomically by the exhalation of a great quantity of serosity into the interior of the cranium, causing a sudden and more or less complete loss of sensibility, movement and intelligence." Notwithstanding the assertion of Abercrombie, that he has met with mortal apoplexies without cerebral lesion and extensive effusion into the cranium where no apoplectic symptoms had been observed, and that therefore the serous effusions when observed are not the cause of the accidents, M. G. considers that it is impossible to question the occurrence of cases of serous apoplexy in old people, in the debilitated, and in those suffering under anasarca, the serosity being carried, as it were by metastasis, to the brain. Œdema of the lungs, hydrothorax, both secondary affections, occurring chiefly during the last moments of life, and hydropericardium, also a secondary disease, are each studied in separate chapters. The remarks on ascites, which is next considered, are prepared with much care, and contain all that is valuable in the present state of knowledge on the subject.

The serous secretions of the mucous membranes next claim attention. They are observed in the digestive tube and in the female genital organs. The former present two varieties, viz., Asiatic cholera and hydro-entorrhœa, or a form of disease occasionally met with, consisting in evacuations per anum of a watery, transparent liquid without mixture of bile or mucus, and causing much weakness for some time. Asiatic cholera is placed here because of its most prominent symptom, intestinal exhalation, and of our ignorance of its intimate nature, which would enable us to give it its proper nosological position. Hydrometra, or dropsy of the womb, is the only other serous exhalation of this kind here noticed.

The third kind of morbid secretions are the mucous secretions, constituting the diseases usually called catarrhs; "which are now considered as mere accidental augmentations of the secretions of the mucous follicles, without these being actually the seat of inflammatory action."

Broncorrhœa, gastrorrhœa, mucous diarrhœa, leucorrhœa and vesical catarrh are each carefully described by the author, the reader being referred to a subsequent part of the work for an account of blenorrhœa. Broncorrhœa is essentially distinct from bronchitis, says M. G., 1st, in its invasion, which is sudden, almost instantaneous; 2d, in the albuminous character of the expectorated matter; 3d, from the great quantity expectorated in a short time; and 4th, in the rapid cessation of its symptoms. Emetics are the best remedies to meet the urgency of the suffocative symptoms. Leucorrhœa is constituted by a white chronic discharge from the female genital organs without any appreciable lesion of those organs, and should be said to exist only when the discharge is sufficient to inconvenience the woman. Science, says M. G., is as yet unable to distinguish simple leucorrhœa from a venereal discharge, and hence it is impossible to ascertain whether a woman labouring under simple leucorrhœa can cause a blenorrhagia.

The fourth kind of morbid secretions are those peculiar to certain organs; they are presented to the notice of the reader in consecutive chapters on super-secretion of the sweat, ephidrosis; of fat, polysarcia; of saliva, ptyalism; of the bile, constituting oftentimes the disease known as common cholera morbus; of the urine, diabetes insipidus; of the milk, galactorrhœa; and of the sperm, spermatorrhœa.

Among these, the most important and which receive most attention, are cholera and spermatorrhœa. In the chapter on the former is an allusion to our cholera infantum, as if it were the same disease. The author merely speaks of the mode of treating it in this country by calomel and emetics [?], which in France, he says, would be considered far less rational than the treatment recommended by M. Ménard, to use only iced drinks for the child and to keep it from nursing until the evacuations cease. Sufficient evidence that our cholera infantum is a disease entirely unknown in France.

The pneumatoses or gaseous secretions are the fifth kind of morbid secretions to which attention is directed. These are emphysema, whether traumatic or spontaneous,—not the vesicular emphysema to be described in a subsequent part of the work,—pneumatoses of the digestive tube, the spontaneous development of gas in the organs of the circulation of the blood,—causing sudden death,—pneumatoses of the urinary organs,—of which M. G. denies the occurrence,—of the genital organs of women, of the serous and synovial membranes, of the peritoneum—of which the occurrence is very doubtful,—of the pericardium, and of the thorax. Pneumo-thorax, says M. G., is perhaps always consecutive to different alterations of the lungs, pleura or some neighbouring organ, or of the thoracic parietes themselves, though under certain circumstances of commencing putridity, aëriform fluids may be met with in the chest.

We have thus arrived at the conclusion of the first volume of the work, upon which we have dwelt so long, that we shall be obliged to pass more rapidly over the contents of the second which commences with an account of poisoning; or "that morbid condition which results from the introduction into the economy by some method or other, of an agent which ruins the health or entirely destroys life without acting mechanically. The substances capable of producing these effects are known under the names of poisons." These, M. Grisolle classifies according to the arrangement of M. Orfila, as irritants, narcotics, narcotico-acrids, and septics.

Among the irritant poisons he gives a summary account of phosphorus, iodine, bromine and chlorine, of sulphuric, nitric, oxalic and arsenious acids, speaking merely of the pathological appearance of the body, of the symptoms of the consequent disease, of the diagnosis, prognosis and medical treatment, omitting all allusion to the medico-legal questions connected with the subjects.

Poisonings by the alkalies and their compounds, by preparations of antimony, gold, silver, tin, bismuth, zinc, and copper, are each briefly treated of in the same manner as those above mentioned. Their description is followed by a careful study of the effects of the preparations of lead, a subject upon which M. Grisolle has elsewhere, in his *Essai sur le colique de Plomb*, ably written, and to which some twenty-six pages of the present work are devoted by him.

Independently of the irritant effects of large doses of the acetate, for example, this metal excites "a special action upon nutrition and consecutively upon different parts of the nervous system, causing, in effect, neuralgic pains in the abdomen and limbs, or delirium, coma, and often convulsions, or more or less extensive paralysis."—II. 18.

The bluish colour of the gums, which is said to be the evidence of intoxication by lead, does not show any thing more, says M. Grisolle, than that there is lead in the system, and that the individual has been exposed to its action, without necessarily being poisoned by it. All the external parts of the body may present the same black or blue colour, when they are placed in contact with sulphur, as in a sulphur bath; "the colour being due to the formation of a sulphuret of lead, by the action of the lead, which, when volatilized, is deposited upon the gums and teeth, and sulphuretted hydrogen which is disengaged throughout the whole extent of the digestive organs."—II. 20.

M. Grisolle gives an account here of lead colic, pain in the limbs, paralysis, and cerebral accidents, of which the relative frequency, according to M. Tanquerel, is expressed by the numbers 12, 8, 2, and 1.

His treatment of lead colic, when vomiting and general symptoms of gastric disturbance exist, is to begin with an emeto-cathartic—℞. Tart. emet. grs. ij, or iij; sulph. sodæ ℥j—followed on the same day by one or two strongly purgative enemata. The abdomen is to be covered with emollient cataplasms, and one to two grs. opium are to be given at night to procure sleep. If there is no vomiting, he commences at once with drastic cathartics, preferring the croton oil, of which one or two drops in pills are given, repeating the dose after 3 or 4 hours if it does not purge. This treatment must be continued for several days, even if the colic has entirely ceased, taking half a drop only every morning. This, with proper dietetic and hygienic treatment, generally suffices for the cure.

Saturnine encephalopathia, caused by the absorption of lead, manifesting itself by exaltation, perversion or abolition of the functions of the brain, was first described by M. Grisolle in 1836, a description, which, he says, M. Tanquerel has appropriated to himself, often word for word, without adding materially to it. This encephalopathia may manifest itself under three forms; 1st, the delirious; 2d, the convulsivo-epileptiform; and, 3d, the comatose; these may co-exist or succeed one another. In about one-half who die with cerebral accidents, the brain and spinal marrow exhibit not a trace of disease. In the other half, the brain appears hypertrophied, the convolutions being flattened and the anfractuosities scarcely marked, so that the surface appears almost smooth. The cerebral pulp is sometimes yellowish, scarcely ever injected, generally entirely exsanguious, its consistence being sometimes natural, sometimes increased or even diminished; the ventricles contain scarcely any or no serosity, and their cavity is sometimes diminished one-third or even a half.

The diagnosis of this form of disease must be based rather upon the symptoms characteristic of saturnine colic, than upon any peculiarity in the form or nature of the cerebral symptoms. Amaurosis coming on suddenly and ceasing after some hours or days, and slowness of the pulse, which is quite a common phenomenon in saturnine poisoning, at least in the early stages, may point to the nature of the attack in some cases. The prognosis is always very serious, more than one half die, the convulsive form being the most fatal. The patient rarely dies if he survives six or seven days, death occurring generally in two or three, or often in a few hours. No particular treatment has proved successful; unless the expectant, which, according to M. Tanquerel, M. Rayer has employed most advantageously.

Under the head of poisoning by mercury, we have full accounts of hydrargyria, mercurial trembling and mercurial cachexia. From them

the author proceeds to speak generally of the vegetable irritants, and then of the animal irritant poisons, as cantharides, muscles, &c.

The narcotic poisons, and especially opium and hydrocyanic acid, next pass in review. M. Grisolle ranges among the narcotics, alcoholic liquors, which cause three orders of symptoms; drunkenness, delirium tremens and spontaneous combustion, which receive attention in the order named. With respect to the use of opium in delirium tremens, M. Grisolle says it often fails; indeed, he objects to the administration of large and repeated doses of it, for fear that it may bring on fatal coma. He recommends no particular method of treatment, rather inclining, however, to adopt the expectant method of Esquirol and Calmeil, who give only sugared drinks, and warm baths, with emetics, purgatives and bleeding when required by the symptoms.

Poisoning by the sulphate of quinia is next spoken of. M. Grisolle refers to the enormous and poisonous doses which it has become the fashion to give of this medicine, and which, he truly says, are "unnecessary, dangerous, and only calculated to bring the profession into disrepute."

"Some unfortunate facts observed in man, especially during the present year, (1843,) confirm, in all respects, the results obtained among animals (Magendie and Mêlier); thus patients to whom 4, 5 and even 6 grammes (80, 100, or 120 grs.) of sulphate of quinia have been administered, have experienced various accidents, of which three degrees have been noticed. In the first, the nervous system is the seat of the symptoms, which are only exaggerations of those observed from ordinary doses; viz., headache, agitation, phenomena of drunkenness, some trouble in vision, and often deafness; in the second degree, delirium, convulsive movements and more extensive paralysis occur, with signs of congestion and inflammation of the lungs, and even hematuria; and finally, in the highest degree, the strength is gone, the debility extreme, and the patients, deprived of sense and motion, become comatose, and may thus die. Those who escape, recover slowly, remain for some time feeble, and many of them remain, during life, blind or deaf."—II. 64.

Carbonic acid is the next point which is studied. We would here remark that there is much reason to believe, from recent researches, made in France, that the deleterious effects which have been hitherto considered as due to the action of carbonic acid, are, in fact, to be attributed to the agency of carbonic oxide, which is always given off when charcoal undergoes slow combustion.*

The narcotico-acrids are next briefly considered; to them succeeds an examination of the fourth kind of poisons or the septic; including among these, poisoning by the introduction of putrid matters into the system, by ergoted rye, by gases from necessaries, by the venom of animals, as the viper, rattlesnake and venomous insects. These are all sufficiently treated of, though very briefly; and bring the author to the consideration of the different kinds of *virus*, the syphilitic, hydrophobic, the virus of malignant pustule and of anthrax, of glanders and of farcy.

M. Grisolle rejects entirely the doctrine which teaches that there is a distinction between the virus of syphilides and blennorrhagia. They are identical in nature, says he, for if you neglect them you will see arise in both, the same constitutional accidents, which can recognize no other cause than venereal infection. Though it is generally true, he continues, that blennorrhagia will not produce a chancre, nor a chancre blennorrhagia, it is too exclusive to say that this is always the case, for the reason above

* Ann. d'hygiène pub. et de Méd. Lég.

cited, which, certainly, is not a sufficient one, for it is not generally admitted, and, besides experiments, of which, however, he denies the applicability, prove directly the contrary. He recommends deep cauterization of the chancre, whatever its form, with nitrate of silver at the commencement, to be followed with dressings of aromatic wine and lint. If it resist several cauterizations, we should have immediate recourse to the specific mercurial treatment. Indeed, M. Grisolle thinks that the use of mercurials, as curative agents, is always advisable, or, at any rate, to establish the cure and prevent consecutive accidents,

"For who can affirm," says he, "that infection has not taken place during incubation, *i. e.*, between the inoculation of the virus and the moment at which induration and the vesicle commence."—II. 98.

In speaking afterwards of constitutional syphilis, he is again at variance with M. Ricord, who asserts that this cannot occur unless there has been absorption of the venereal virus, an absorption which can only take place from the surface of an ulceration, and that hence, chancre is the necessary antecedent of the constitutional symptoms. M. Grisolle's arguments upon all these questions are entirely inconclusive, and do not establish the position he aims at. A good account of blennorrhagia, whether acute or chronic, of *syphilides* or the cutaneous affections, produced by the constitutional action of the syphilitic virus,—taken chiefly from M. Cazenave's valuable treatise,—of the affections of the mucous membranes and cellular tissue of the iris, of the testicle,—according to Sir A. Cooper, its chronic engorgement,—and of the fibrous and osseous tissues, closes the subject of syphilitic disease.

As to its prophylaxis, M. Grisolle says that whoever would devote himself to the glorious work of discovering a means of prevention, would deserve, if successful, the gratitude of mankind; "for the times are past, when a retrograde *moral* and religious prejudice caused the pox to be regarded as a just chastisement of libertinage, or taught that it was immoral and contrary to the views of Providence to occupy one's self with the attempt to discover the means proper to prevent contagion."—II. 149. We must confess that these are droll sentiments, and that we have yet to learn that the times referred to in the first section of this proposition are yet past. Certainly a genuine, correct *morale* would teach that the only and best prophylaxis is to avoid the causes.

Having given a short chapter to frambœsia, the author proceeds to the subject of hydrophobia. He ridicules the idea that no such disease exists and that would make the symptoms indicative of rabies the result of imagination and of alarm. This disease can only be communicated by the frothy discharges from the mouth, in contact with an abraded surface; and this frothy matter is not secreted by the salivary glands, but comes from the air passages alone, as dissection decisively proves. M. G. states, that in the human subject, there is no appreciable lesion after death; a fact of which he has satisfied himself by six or seven autopsies, at the Hotel-Dieu of Paris.

"Thus in persons dying of hydrophobia, we find only varying and purely accidental lesions; the same is the case in animals. The observations hitherto published to prove that in hydrophobia there is an inflammation of the mucous membrane of the air passages, or of the digestive organs, or of the nervous centres, can inspire no confidence; for it is easy to see that authors have been contented with a simple and generally passive redness to admit the existence of inflammation."—I. 153.

Malignant pustule and malignant anthrax, virulent affections transmitted

to man by certain domestic animals, characterized by gangrenous inflammation of the integuments, rarely extending beyond the cellular tissue in the former, but more deeply in the latter, affecting those who attend or slaughter the animals or dress their skins, developing themselves always in the part in contact with the infected animal, and capable of being transmitted from man to man, are very serious and fatal diseases from the constitutional symptoms to which they give rise, and should be arrested by the immediate destruction by caustic of the part affected.

As to glanders, once considered peculiar to the solipedes, but now known to be transmissible to man, M. Grisolle thus sums up his opinion:

"It is a virulent disease resulting from the introduction into the economy of a deleterious substance furnished by the solipedes, attacked with glanders, and existing in the nasal secretions, pus of abscesses, and perhaps also in the blood. From the cause which produces it, and the grave symptoms which accompany it, it must be considered a general affection, the local alterations which characterize it not being the cause, but the expression of the general condition. In man, acute glanders is identical with that in the horse. The same rheumatic pains, the same nasal flux, the same eruptions and ulcerations of the nasal fossæ, the same pulmonary inflammation, the same muscular abscesses, the same pustular eruptions of the skin, as well as gangrene, are observed in both. The only difference at all remarkable, consists in the alteration of the submaxillary lymphatic glands, which are constantly inflamed in the solipedes and rarely or only to a feeble degree in man."—II. 170.

The author's account of this disease and of farcy, both in the acute and chronic states, is full and very interesting, and well worthy of careful perusal.

The sixth class of diseases, according to the division laid down by M. Grisolle, are lesions of nutrition. They are arranged under seven distinct sections, each relating to some specific lesion, viz., 1st, hypertrophy; 2d, atrophy; 3d, induration; 4th, softening; 5th, gangrene; 6th, ulcerations; alterations which are studied as affecting certain organs in particular; in the 7th, he reviews certain alterations, which are most generally consecutive to some one of the above lesions, viz., 1st, contraction and obliteration of hollow organs; 2d, their dilatation, and 3d, their rupture, laceration and perforation.

After a general consideration of hypertrophy, its occurrence in the brain,—a subject especially studied only during the present century—is particularly dwelt upon. The brain presents the same appearances as in saturnine encephalopathia; this lesion occurs equally at all ages of life, and is even congenital, being probably always a fatal one, chronic in its march, and manifesting itself by severe headache, disorder of the intellect, convulsions and partial paralysis, without fever. Hypertrophy of the spinal marrow is more rare and reveals itself by no special symptoms.

The chapter on hypertrophy of the heart is very ably and carefully written. M. G. considers it an error to suppose that hypertrophy of the left ventricle predisposes to hemorrhage and to softening of the brain. Notwithstanding the numerous supporters of this opinion, M. G. says,

"It is contradicted by Rochoux and is in opposition to the numerous facts collected by himself (M. Grisolle), and to the observations analyzed by M. Louis, who has never in a single instance found hypertrophy coincide with a cerebral hemorrhage, and who, besides, has noted the occurrence of softening of the brain less often in cases of hypertrophy of the heart, than in the course of several other affections, as phthisis. We, (Mr. G.), have proved elsewhere from the writings of the same author, that hypertrophy of the right ventricle is not, as has been pretended, an active cause of pulmonary hemorrhage."—II. 191.

As to Valsalva's treatment of hypertrophy of the heart, the author deems it barbarous, having never cured any body, and having certainly often hastened death. He agrees with Hope in the opinion, that bleeding often fails as a palliative, especially when there is also considerable dilatation of the cavities.

Hypertrophy of the liver differs from cirrhosis which the author afterwards treats of, by the fact, that in the former, both the red and yellow substances of the liver are increased, causing a more or less considerable enlargement of the organ; while in the latter the yellow alone increases, the red, in fact diminishing, so that the liver either retains its normal size or is actually diminished in volume. Hypertrophy of the spleen, one of the sad heritages of those who suffer from intermittent fever, is briefly treated of.

Hypertrophy of the thymus gland, which has recently been invoked as the cause of a form of asthma, receives a short notice from M. Grisolle, who thus concludes:

"We shall insist no further upon the description of this disease, of which the existence is not even yet proved; [he does not allude to the American cases.] No one in France has ever observed it, and the statements which have come from foreign countries are so incomplete and so little precise, that we are authorized to ask if thymic asthma is an actual disease, or if there have not been confounded under this name different affections of the brain and of the pectoral organs; such, at least, is the opinion of many pathologists, and our own among the number.—II. 208.

Hypertrophy of the thyroid gland and elephantiasis of the Arabs, are the subjects of the concluding chapters relative to this form of disordered nutrition. These are followed by some general remarks on atrophy, generally, and then some accounts of it as occurring in particular organs, as the brain, the spinal marrow, the heart and the liver; all being incurable affections.

Induration of the same organs, a lesion which cannot be recognized during life, and consequently presents no indications for treatment, is next briefly spoken of; to these descriptions succeed those of a more important lesion, viz., softening, which is very frequent, has been observed in almost all the organs, and is now generally considered as independent of inflammation: the irritation in an organ giving impulsion to an aberration of nutrition, but not causing it or being at all necessary, either antecedently or actually, to its occurrence.

Softening of the brain first claims attention. Differing from MM. Lallemand and Durand-Fardel, M. Grisolle says:

"We believe that cerebral softening should be considered a special lesion, a peculiar mode of destruction, common to several of the organs, and of which the mechanism, and the immediate or proximate cause entirely escape us in the greatest number of cases; whilst in some it appears to be owing to an impoverishment of the economy, or to a diminution of the activity of the encephalic circulation."—II. 244.

Softening of the spinal marrow, of the heart, of the stomach, of the intestinal mucous membrane and of the bones,—under the heads of rachitis and osteo-malacia,—are described in separate chapters. But we are compelled to pass over these interesting accounts and also those relative to gangrene,—particularly studied as occurring in the lungs, mouth, pharynx and vulva,—and to those on ulcerations,—which last are dismissed with some very general and brief remarks,—to take up the consideration of the seventh kind of lesions of nutrition, viz., those causing contraction, oblite-

ration, dilatation, perforation or rupture of hollow organs. These are ordinarily consequent upon some one of the lesions of nutrition, already indicated, though they require separate description, as some of them appear to occur spontaneously and in consequence of some special and as yet undetermined lesion of nutrition,—as noticed particularly with certain dilatations and perforations of hollow organs and passages,—and to offer the only source of therapeutic indication.

After some general remarks upon the causes, nature, &c., of contractions (*retrecissements*) and obliterations, those occurring at the orifice of the heart are especially dwelt upon. This chapter is exceedingly interesting and ably drawn up, summing up with much care and knowledge the whole subject, and presenting an excellent account of those most important lesions. As to their diagnosis, M. G. thus speaks, in unison with MM. Chomel, Piorry, &c.

"Their diagnosis can only be established by the *simultaneous existence* of several symptoms; thus, a permanent sound as of a bellows, file or saw, at the precordial region, coinciding with an irregular, unequal, intermittent pulse, with dyspnœa, and the other signs of disease of the heart, will indicate *almost certainly*, but not indubitably, that there is a contraction of one or more of the orifices of the heart. M. G. is thus reserved in his opinion, because he has many times seen all these signs together in an individual dying of hypertrophy with dilatation of the left cavities of the heart, without any alteration of the valves and orifices; he has besides met with persons, who, although labouring under considerable contraction of the orifices of the heart, nevertheless presented no morbid sound at the precordial region."—II. 293.

Contraction and obliteration of the arteries and veins are studied in separate chapters; his account of arteries being drawn from a paper by M. Barth, which contains an analysis of a large number of cases, and which has never as yet been published. The air passages, the œsophagus, and the intestinal tube may also suffer from this lesion, which, as occurring in the intestines, causing their occlusion, or ileus, is studied in a separate chapter.

Dilatations are the next alterations passed in review. They have been observed in the bronchi; but more especially in the vesicles of the lungs, constituting the disease known by the name of vesicular emphysema, so admirably described by MM. Louis, Jackson, Beau and Stokes. MM. Louis and Stokes have satisfactorily established that in these cases the volume of the heart was increased, and that in proportion to the extent and duration of the emphysema. M. G. says,

"This disease is essentially characterized by the dilatation of the pulmonary vesicles, whose parietes have undergone different changes of nutrition (hypertrophy, atrophy, or destruction). These changes necessarily render hæmatosis difficult, which fact explains the habitual dyspnœa of the patient and the organic affections of the heart which often result from it."—II. 340.

Dilatation of the cavities of the heart or of portions of a cavity, and of the lymphatics and aneurism of the aorta, pectoral and abdominal, dilatations of the œsophagus, and of the stomach, are each sufficiently described in separate chapters, and bring us to the consideration of the only remaining lesions of nutrition, lacerations, ruptures and spontaneous perforations. Among these is placed the subject of *cyanosis*, or, according to the author, "the congenital or accidentally established communication either between the right and left cavities of the heart, or between the vascular trunks which proceed from it." He enumerates some twelve different congenital de-

formities which may allow the admixture of the arterial and venous blood, stating, at the same time, that the most usual one is the persistence of the foramen ovale. In rather more than one half the cases, MM. Louis and Gintrac have shown that the valves of the right side of the heart were deformed, and in all these the lesion occupied the valves of the pulmonary artery. "We believe," says M. G., "with M. Louis, that these coarctations of the pulmonary orifice are for the most part a congenital lesion, and it is rational to refer to this obstacle the persistence of the foramen ovale, when these two lesions coexist in the same individual." "The persistence of the foramen ovale and of the arterial canal, among the lesions enumerated, are those which appear to allow the longest life."—II. 375. This opinion is fully sustained by the authority of Craigie and of Dr. Moreton Stillé, in his interesting thesis upon the subject of cyanosis. (See this Journal for July, 1844, p. 25.) M. Grisolle agrees, farther, with those who attribute the blue colour to the trouble and embarrassment of the circulation; this embarrassment being caused by the primary deformed condition of the heart or of the lesions which accompany it.

These lesions are finally disposed of in separate chapters relative to the rupture and perforation of the aorta, of the diaphragm, of the abdominal organs, the spleen, liver, &c., of the bladder and of the uterus.

Organic transformations and accidental morbid productions constitute the seventh class of diseases, which are considered under two chief divisions: 1st, those diseases which are characterized by the transformation of one tissue into another or by the development of new tissues analogous to or identical with the natural tissue; 2d, those characterized by the formation of new products entirely foreign to the economy. In the first he merely speaks of those of practical importance, as the fatty, serous, horny, cartilaginous and bony degeneration or transformation, terminating with some remarks on polypi. Among the second kind, he includes, 1st, inorganic concretions; 2d, entozoa; 3d, morbid formations, which, when deposited in the tissues, depress them, penetrate them, and even convert them into their peculiar substance; these are cancer, tubercles and melanosis.

It is sufficient to mention that he briefly describes the fatty degeneration, especially that of the heart, which is sometimes loaded with it; he then passes to an account of the serous productions, as cysts, especially of the brain, liver, spleen, kidneys and ovaries. As to the causes of the ovarian cysts, M. G. says nothing precise is known, their development being almost always spontaneous. He thinks that nothing but a palliative treatment of them should be attempted, as he is convinced by experience of the impotency of medication to arrest or cure them, and deems all the propositions for their extirpation by surgical operations, "as at least imprudent and not justifiable by the citation of some successful cases."—II. 400.

The horny or epidermic productions—ichthyosis, pityriasis, lepra and psoriasis,—the cartilaginous and bony transformations, which may attack almost every tissue, and polypi, receive due attention, leading the author to the study of the second kind of morbid productions. Among these, inorganic concretions or calculi are considered first generally, and then as occurring in the intestines, gall-bladder, biliary ducts, and urinary organs. Then follow some interesting remarks upon the various parasitic animals, entozoa and epizoa, each of which is the subject of special observation and description in the pages before us. As to the mode of origin of the entozoa, M. G. ranges himself with those who maintain their spontaneous generation, "under the influence of pathological causes," which he con-

siders "as not more extraordinary than the formation of zoosperms in the human testicle; these are equally organic acts, morbid in the one case, physiological in the other, of which the mechanism entirely escapes our explanation; once formed, the entozoa reproduce themselves in various modes."—II. 442.

M. Grisolle now commences his discussion of the third, and by far most important class of these diseases, viz., that containing cancer, tubercles and melanosis. Our remarks have extended to such a length, however, that we can but briefly point out some of the author's views upon these interesting subjects.

Scirrhous and encephaloid tumours are regarded as merely two alterations arising under the influence of one and the same diathesis, causing the same accidents, and requiring the use of the same therapeutic means. M. Grisolle notices the statements of MM. Andral and Gavarret, that they found by microscopic observation, in the blood, after the disease was fully established, a large number of well-marked pus globules, and alongside of them elliptic lamellæ, granitic on their surface, much larger than the pus globules, and of a form much more regular than that of simple albuminous plates. These same lamellæ were also observed in great numbers in the ichorous matter from the midst of the cancerous masses.

This alteration is studied as occurring in the brain,—the remarks on it being chiefly taken from M. Calmeil's excellent summary in the *Dict. de Médecine*,—in the lungs and pleura, in the œsophagus, in the stomach,—of which *black vomiting* and an epigastric tumour are the only reliable pathognomonic evidences,—in the intestines, pancreas and liver, in the kidneys, and finally in the uterus. The chapter relative to cancer of the uterus is one of the most complete in this volume, not a point of interest being passed over, though it is as concisely drawn up as possible.

Tuberculization next receives attention, the author commencing with an admirable summary of the amount of our knowledge relative to tuberculization in general,—his opinions respecting the origin, mode of development, softening, &c., of tubercles, agreeing almost entirely with those of M. Louis. To establish the diagnosis of acute tuberculization, a common disease among children, is exceedingly important. M. Grisolle says,

"It may be suspected in children who, naturally weak, are attacked without cause, or after an eruptive fever, and especially measles, with a moderate but continuous febrile movement, persisting, during several weeks, without evident cause; for, as MM. Rilliet and Barthez have remarked, there is no other disease of childhood which, with an acute or subacute march, does not exhibit, within ten or twelve days, local symptoms sufficiently decided to give a more or less positive indication of its nature."—II. 527.

With respect to the treatment of children threatened with tuberculous disease by their constitution or by hereditary predisposition, M. Grisolle traces some hygienic rules, condensed from the new edition of M. Louis' work on phthisis.

"The children of whom we speak should be confided immediately after their birth to vigorous nurses, who present every trace of the sanguine temperament, and enjoy irreproachable health. The children should be exercised in the open air and sun-light, and should live in an airy place with a good exposure. At the period of weaning, animal food should be given, commencing with the lighter articles, as broths, meat jellies; these being gradually replaced with mutton, beef, and dark meat generally; some good wine should also be allowed them; and the hours of eating should be properly regulated,—the children being prevented from eating at all times of the day, and from indulging in indigestible articles, as

pastry, which have the effect of deranging the functions of the stomach, causing diarrhœa, which always enfeebles the children, and thus becomes an efficacious cause of tuberculization. If the digestion is languid, or the appetite diminishes, some bitter infusion may be given to excite the activity of the stomach. At the same time the functions of the skin should be excited from time to time by dry frictions over the whole body, and by the administration of salt baths. We should also, as recommended by M. Louis, watch over their sleep; some scarcely sleeping at all without any evident reason. Such a state of things is always injurious, especially in the children of whom we are treating; we should therefore endeavour, as soon as possible, to restore sleep by the administration of an opiate several days in succession. It is unnecessary to remark that the fears entertained by some physicians, that opium may arrest the intellectual development of children, are entirely groundless."—II. 529.

At a more advanced age, every effort should be made to invigorate the constitution, by the use of exercise in the open air, bathing, especially in salt water. the use of bitter infusions and ferruginous preparations, where the children are pale and suffer from bilious diarrhœa, and by giving them regular habits of eating and sleeping.

Tuberculous meningitis is the first special form of tubercles described by M. Grisolle. The means of diagnosing this from simple inflammatory meningitis are carefully exposed. In the latter, the symptoms being exactly the same as in the former, declare themselves clearly and distinctly from the start, the symptoms of excitement being generally more intense, and occurring sooner in it, the march being more rapid, increasing and proceeding rapidly to a termination; while in the tuberculous form, the attack generally occurs in persons who have been suffering for some time, and present, more or less, the signs of tuberculous disease, with temporary violent exacerbations of the symptoms, the patient being in the interval calm and rather dull; the fever may be slight, or even absent, and the march of the disease is remarkable for its slowness, irregularity and alternations of ease and suffering.

A good summary account of tubercles in the brain, chiefly borrowed from M. Calmeil's article in the *Dictionnaire de Médecine*, brings us to the important chapter on pulmonary phthisis, which is, in fact, an abstract of M. Louis' valuable researches upon the subject. Nor does the author forget to acknowledge and make use of the important facts published by Carswell and Walshe.

The cretaceous transformation of tubercles of the lungs, unquestionably the evidence of a curative process on the part of nature, is not rare, since M. Roger, we are told, discovered it in about half (51 in 100) of the old women whom he opened at Salpétrière. M. R. has farther proved that these cretaceous masses are the result of transformed tubercles, and of nothing else. He has also ascertained that most generally not more than one cicatrix is ever met with in the lungs, and that it is rare to find two or three in the same individual. These are extremely important facts in proof of the curability of phthisis, but they also show that cure can only take place when the alteration is not very extensive. M. Grisolle, agreeing with MM. Andral and Louis, states that the opinion of those who regard *fistula in ano* as of frequent occurrence among phthisical patients, is not founded in facts; for in 800 tuberculous patients, M. Andral has met with it but once.

Tubercles in the bronchial glands, mesenteric phthisis, and tubercles in the kidneys, are the subjects of separate chapters; these are followed by one on scrofula, which the author defines to be "a constitutional condition characterized by different lesions,—occurring in the soft parts and in the

bones,—and particularly by chronic engorgement and tuberculization of the lymphatic glands." M. Grisolle does not agree with M. Lugol in the extent to which his opinion of the hereditary transmission of this disease is resorted to, to explain its occurrence; while admitting with him that it is the most powerful agent in its production, M. Grisolle considers that the disease arises from a multitude of causes, none of them, however, acting surely and constantly.

A chapter on melanosis closes the subject of accidental morbid productions, and is followed by the description of the eighth class of diseases or the neuroses. These are divided, as by M. Andral, into five groups.

"In the first are those characterized by a derangement of the sensibility which is sometimes exalted even to pain, sometimes diminished and sometimes even entirely extinguished; in the second group, are those characterized by a lesion of movement; in the third, are those producing disturbance of the intelligence, as the different species of delirium; in the fourth, those causing a simultaneous derangement of all the functions; and in the fifth, those peculiar to certain organs."—II. 611.

We would gladly dwell at some length upon this important class of diseases, which are exceedingly well treated of in the volume before us—M. Valleix's work upon the cephalo-rachidian nerves being taken as the author's most reliable authority; but we must content ourselves with a mere enumeration of the points upon which he has touched. He prefaces his account with some excellent remarks on neuralgia in general, consisting in a functional disturbance without material alteration of the organs affected. He then proceeds to present the characters, &c., of different special forms of it, as the trifacial, hemicranial, cervico-brachial, intercostal,—or, as he says, the spinal irritation of the American and English authors,—lumbo-abdominal, ileo-scrotal and testicular, and that of the sciatic nerve, commonly called sciatica. Angina pectoris, which M. G. says is a neuralgic affection, and not essentially connected with any organic disease of the heart or of any other organ, though it is at present difficult to say what nerves are affected, is the subject of an interesting chapter. It is followed by accounts of gastralgia, contradistinguished from the other neuroses peculiar to the stomach, of enteralgia and hyperæsthesis or exalted sensibility of the skin.

The second kind of neuralgias are those characterized by lesions of movement. Under this head, tetanus, contractions, (*contractures*,) chorea, paralysis and œsophagism are considered; the reader being referred to the fourth kind for accounts of the complex neuroses, eclampsia, epilepsy, hysteria, and catalepsy. The third kind are those which relate to derangements of the intellect; as delirium, insanity, hypochondriasis and idiocy; all of which receive a full share of the author's attention and are carefully treated of.

The fifth kind of neuroses, or those peculiar to certain organs, are for the respiratory organs, nervous aphonia, pertussis, asthma and hiccough; for the heart, palpitations and syncope; for the stomach, bulimia, pica, dyspepsia and nervous vomiting; and for the genital organs, hysteria, priapism and anaphrodisia; neuroses, which as it will be observed, embrace a number of important diseases, of frequent occurrence and requiring skillful management. M. Grisolle enters fully into the discussion of their peculiarities, and lays down careful rules for their treatment. We must pass over these to notice very briefly the remaining class of diseases recognized by our author, or those which are peculiar to certain organs or tissues, and which could not advantageously have been brought under any other general head.

The diseases peculiar to the digestive organs are first considered, the author here speaking of the accidents to which children are liable during the first dentition, of gastric embarrassment, intestinal derangement, constipation and intestinal invagination. It may seem somewhat extraordinary that the next disease of the digestive organs should be diabetes, "a disease characterized by the presence in the urine of a more or less considerable quantity of sugar." M. Grisolle thus justifies himself for this arrangement.

"Attempts have been made to localize it, by calling it a general affection, consecutive to an alteration of the blood; or by making it a special disease of the kidneys,—and this is done by a large number of pathologists,—or by placing its seat in the digestive organs. This last opinion is the only admissible one. We are, in effect, led to believe that under the influence of a special disposition, of which the cause escapes detection, sugar is formed in the stomach, particularly at the expense of the fecula; showing why the thirst and the quantity of sugar in the urine are in proportion to the quantity of fecula swallowed. The sugar formed passes thence into the blood, whence it is eliminated by the kidneys, as would be any other foreign product. This theory has been perfectly developed by M. Bouchardat (as well as by others) in his *Annuaire de Thérapeutique*, 1840."—II. 816–17.

Jaundice is the only remaining affection of the liver which has not yet been considered. The affections peculiar to the heart are, insufficiency of the valves, and sanguine concretions commonly described under the name of polypi. Asphyxia, either the consequence of the inhalation of gases unfitted for respiration, or caused by mechanical obstruction to the entry of the air into the lungs, 1st, by compression of the thorax, 2d, by strangulation, and 3d, by submersion, is the only form of disease, peculiar to the respiratory organs, here described.

The disorders of the menstrual function, as dysmenorrhœa, deviation of menstruation,—when the discharge of blood takes place periodically from some other organ than the uterus and vagina,—amenorrhœa, and the final suppression of the menses at the critical age, are the diseases peculiar to the genital organs which remain to be examined, and are treated of in a clear, satisfactory, though concise manner.

It only remains now to consider the subject of rheumatism, a disease peculiar to the muscular and fibrous tissues. M. Grisolle studies it as it occurs in each of these tissues, prefacing with some general remarks his description of particular kinds of muscular rheumatism, as torticollis, pleurodynia, lumbago, &c.

Acute articular rheumatism, which, from his own examinations, M. Grisolle states, does not leave, at least in the great majority of cases, any notable lesion in the articular surfaces, is an "affection of a peculiar nature, and one which must in all cases be distinguished in theory as well as practice from the genuine phlegmasiæ." The author, after examining the grounds upon which the distinction between it and gout have been based, thus concludes:—"In a word, we believe with MM. Chomel and Regnier, that nothing authorizes a fundamental distinction between gout and acute articular rheumatism."

A few brief remarks must close this extended notice of one of the most valuable contributions to the medical literature of the day,—valuable, not so much for originality of views, to which it does not pretend, as for the excellent summary it affords of so great a number of diseases,—a number not exceeded, if even equaled in any other treatise on internal pathology,—for the judicious discrimination between what is useful and established in science, and that which is frivolous and theoretical,—for the adoption of

the system of rigorous analysis of facts as the foundation of the descriptions contained in its pages,—for the just appreciation of the labours of others, corrected and controlled by the author's own enlarged experience, and for agreeable style and vigorous description, imparting all the interest of novelty and originality.

It must be recollected, however, that with some honourable exceptions, the work is made up from the accounts of French pathologists and therapeutists, a selection very proper as regards pathology, but not quite so much so, perhaps, as respects therapeutics; which certainly is the least satisfactory part of the book, though we must confess that in reference to the treatment, the author's views appear in general to be rational and practical.

In a word, this is the best French text book on internal pathology we have met with, and must commend itself to the French student. With some additions it might very advantageously be translated and adopted in our own schools. Although it would hardly take the place of some of the excellent treatises in our own language, there is room enough for another such as this, which is not surpassed for conciseness of description, and which presents, at least, as compendious and lucid a survey of the elements of the practice of medicine as any other general treatise at present accessible to the student. C. R. K.

# BIBLIOGRAPHICAL NOTICES.

ART. XI.—*Narrative of the United States Exploring Expedition during the years* 1838, 1839, 1840, 1841, 1842. By CHARLES WILKES, U. S. N., Commander of the Expedition, member of the American Philosophical Society, &c. In five volumes and an atlas. Philadelphia: Lea & Blanchard, 1845.

A NOTICE of a voyage of discovery, however interesting its incidents may be to the general reader, might appear out of place in a work devoted to medical science, but the splendid volumes now before us, contain so much that belongs to our domain, that we cannot forbear laying before our readers a few extracts from them. This we shall do without attempting to present even an outline of the voyage or of the difficulties attendant on its progress. All of our readers are aware that by an act of Congress of 18th May, 1836, an expedition was ordered to be fitted out for the purpose of exploring the great southern ocean. Many causes, to which it is not our province to advert, delayed the execution of this undertaking until 1838, at which time Captain Wilkes was appointed to conduct it. We may, however, be permitted to say, that on no one among our many gallant and enterprising officers, could the command have more appropriately been bestowed than on him, when the requisites for its success were indomitable energy and perseverance, nautical skill, and a highly cultivated mind; no one can rise from a perusal of the narrative without being thoroughly satisfied that every thing was done that it was possible to effect, under the circumstances in which he was placed.

The expedition, consisting of the sloops of war, Vincennes and Peacock, the ship Relief, the brig Porpoise and tenders, Sea Gull and Flying Fish, left Hampton Roads on the 18th of August, 1838, for Madeira, where they arrived on the 16th September. Captain Wilkes states, in 1836 the population of this island and that of Port Santo amounted to 115,447, that the births in 1835 were 4102, of which 425, or upwards of one-tenth, were illegitimate; the deaths the same year were 2751, showing an excess of 1351 of births; the marriages were 1065.

After leaving Madeira, the squadron proceeded to Rio Janeiro; among the remarks made during this passage, we find the following interesting notice as regards the deposit of dew:—

"We had now (long. 17 W. lat. 0) heavy deposits of dew, on several fine and cloudless evenings. Indeed, the sun had scarcely set before the ship was quite wet with it. One of the essential requisites supposed necessary by Dr. Wells for a deposit of dew, was entirely wanting in this case, viz.: that 'the temperature of the body on which it was deposited, should be considerably lower than the surrounding air,' the temperature of the air and ship having remained the same for several days at about 78°; all objects, hammock-cloths, spars, sails and rigging, so far as could be ascertained, showed the same, and at the time when the dew was observed to be most copious, we had a fine breeze." This is certainly a singular phenomenon, and is, as the author observes, at variance with previous observations. The only mode in which it can be accounted for, is by an exceedingly rapid radiation from the several objects mentioned, the moment the sun sunk below the horizon. The expedition reached Rio Janeiro on the 23d Nov., and remained there until early in January, employed in repairing the vessels, during which time, the officers and naturalists were fully occupied in various interesting observations and researches; those of Mr. Hale, the philologist, are replete with interest to the anthropologist, as he describes and figures the various negro tribes brought as slaves to Brazil; these differ in cranial conformation and in character far more widely than is generally supposed, some having but little of the distinctive peculiarities of the negro race, whilst others possess them in the highest degree. As it is impossible to give an analysis of this interesting subject,

though we should like to transfer it to our pages, we must refer our readers to the work itself.

Notwithstanding the heat of the climate and the excesses of the seamen, the general health of the squadron did not suffer during their stay at Rio. In nothing, perhaps, has hygiene more improved during the last century, than in the regulations now adopted by all maritime nations in the outfit and attention to the health of seamen. Previous to the time of Captain Cook, the loss of seamen during a long voyage, by disease, was far greater than in the most bloody engagement; any one referring to the voyages of Anson and others, will find that in almost every instance, from one-half to two-thirds of the crews were disabled by scurvy and other diseases, in passages that are now made without the loss of a man, except from casualties; indeed, from the investigations we have made on the subject, we are satisfied that the chances of life among seamen are far higher on board a well-regulated ship on a long voyage, than on shore.

We shall not follow the narrative in its details, however interesting they may be, as our limits forbid so extended a notice, but shall content ourselves with noting such observations as more directly bear on our department.

Captain Wilkes confirms the statement of recent travelers as to the stature of the Patagonians, that, although it is above that of Europeans, it is by no means so much so as asserted by Bougainville, Dampier, and others. It is a remarkable fact, that while these people are well formed and tall, that their immediate neighbours, the inhabitants of Terra del Fuego, should be so diminutive and ill shaped.

No fact connected with the history of man is more striking than the diminution and gradual extinction of the savage races, from the moment they become influenced by civilized nations; this, which is amply exemplified in our own country, seems to hold good in all parts of the world. Thus, from a census taken in Tahiti, it would appear that at the time the expedition visited that island, the population was 9000, and of Eimeo 1000. "When," as is observed by Captain Wilkes, "this is compared with the estimates of the navigators who first visited these islands, an enormous decrease would appear to have taken place."

Allowing with our author that the first estimates were too high, still the decrease is enormous, and cannot be accounted for except in part, by the introduction of new diseases, though there can be no doubt that these materially added to the mortality; whatever the cause, it would seem that the transition from the savage to the civilized or rather semi-civilized state is always accompanied with a great increase of mortality. According to the missionaries at Tahiti, for the last thirty years, the population has remained stationary, the births and deaths being nearly equal, and yet from the great diminution of deaths by infanticide, so universal at the time of the discovery, we ought to expect a visible increase in the population. The other semi-civilized islands in the Pacific evidence a still greater diminution in their population than those under consideration, as will presently be shown. This extinction of savage races has been attempted to be accounted for by the introduction of ardent spirits and syphilis; as regards the former, there can be no doubt of its evil influence, but on the other hand, the inhabitants of many of the islands in the South Sea were in the habitual use of a far more deleterious stimulant than ardent spirits, before their acquaintance with Europeans, and yet their population was on the increase, and, as respects syphilis, although it was widely disseminated among them, still it appears to be far milder in its symptoms than among the white nations.

It does not appear from this narrative that the Tahitians are subject to any peculiar diseases, but this is not the case with the inhabitants of the Samoan group. Captain Wilkes says, "among the diseases which afflict adults, one of the most usual is a spinal affection, which results in caries and produces humpback. This is no doubt owing to the peculiar manner in which the children are carried." "There is an eruptive complaint, called ilamea, which covers many of the children under the age of ten years with sores, and which seems more particularly to attack the face and head." Elephantiasis and ophthalmia are also very prevalent. Fevers are rare, and syphilis is hardly known. The principal curative means employed by the natives in the treatment of disease is a kind of shampooing.

The account of New South Wales and of the Antarctic cruise, though possessing,

more especially the latter, (in which Captain Wilkes had the glory of discovering the long-looked for Antarctic continent,) extreme interest to general readers, afford nothing for us to notice relative to medical science.

New Zealand, which was next visited by the expedition, would appear to be liable to the same diseases as this country. Thus it is stated,

"Warm days are often succeeded by cold nights, which give rise to pectoral diseases among the natives, many of whom are affected by phthisis or swept off by rapid consumptions. They are also liable to rheumatism and palsy." "Measles, hooping-cough and other epidemics have been introduced from foreign vessels: while we lay at the Bay of Islands, the influenza prevailed on shore and was communicated to our crew."

These facts possess much interest, as they show that certain complaints, which of late have been supposed to be non-contagious, are in reality communicable; for if pertussis and rubeola are not contagious, how is it possible that they could be communicated to a people among whom they were formerly unknown? It is to be lamented that we have not further and more definite accounts of the diseases of savage nations, and of the first appearance of certain epidemics among them, as nothing would more completely settle the mooted point of contagion than such data; hitherto we have had nothing but incidental notices, similar to that quoted above, which leaves the matter still liable to dispute.

At Tongataboo, Capt. Wilkes is of opinion that the climate is not salubrious, in consequence of the rapid transitions of temperature; the diseases are such as might be expected, influenza, catarrh, and phthisis, fevers, &c., though he states, judging from the number of old persons, longevity is by no means uncommon. The venereal disease not as prevalent as at Tahiti.

Among the inhabitants of the Fejee group we are told that parturition is not usually severe, and that it is a prevailing opinion that hard work renders the birth more easy. "Midwifery is a distinct profession, exercised by women in all the towns, and they are said to be very skillful, performing operations which among us are considered as surgical. Abortion is prevalent, and nearly half of those conceived are supposed to be destroyed in this manner, usually by the command of the father, at whose instance the wife takes herbs, which are known to produce this effect. If this do not succeed, the accoucheur is employed to strangle the child and bring it forth dead. A child is rubbed with turmeric as soon as it is born, which they consider strengthening. Girls reach puberty when about fourteen years old, and boys when from seventeen to eighteen."

We have a much fuller account of the diseases prevalent in this group than of any other country visited by the expedition, drawn up from notes of Dr. Fox, the acting surgeon of the Vincennes. He states that rheumatism is very common, especially among the women, and is treated by deep incisions over the affected part. Dysentery never prevails as an epidemic, though sporadic cases occur. The disease of the spine, noticed as so common in the Hawaiian group, was quite rare here. Phthisis pulmonalis and fevers were almost unknown, and ophthalmia is less frequent than in the other groups of islands. Syphilis also was not met with; ulcers are frequent. Influenza appears as an epidemic, and is supposed by the natives to have been introduced by the whites; it is often very fatal: in one of its visitations, one-tenth of the natives are said to have fallen victims to it.

"The most remarkable disease, and one that is believed to be peculiar to this group of islands, is what the natives call the 'dthoke.' It somewhat resembles the yaws of the West Indies, so common among the negroes. In adults who are afflicted with it, it assumes the form of secondary syphilis, and those unacquainted with the history of the disease, would unhesitatingly pronounce it a syphilitic taint. It usually attacks children from two to nine years of age, and according to the natives and white men's experience, none escape. Dr. Fox is of the same opinion; every child of ten years of age that fell under his observation, had had this disease, and in many cases still had it.

"Its first symptoms are fretfulness and inactivity on the part of the child; a swelling of the fingers and pains in the bones follow; these pains, which are rheumatic in character, continue at intervals throughout the disease, and are followed by small red spots in different parts of the body. These become round pustules, varying in size, and result in ulcers. After the eruption has appeared, the pains

about the bones cease to be so general. Sometimes they disappear in fine weather, but return when it is damp and wet. In other cases, they lose the fugitive character, but have a constant fixed pain over the same bone, which is not relieved until the integuments inflame and the carious bones find exit. In the first attack there is much irritation, particularly at night, and more or less fever. This also disappears in most cases as soon as the eruption is out. The mouth, arms, and umbilic ulcerate around the whole circumference." "In adults the pericranium is oftener affected than in children, the bone is denuded, and frequently pieces of the table of the skull come away. In some cases the eruption does not appear, or after appearing, immediately dries up. These cases are said to be invariably fatal. Cases are by no means rare of the loss of the bones of the palate and nose. This disease varies in duration from nine months to three years. The natives say that this disease has always prevailed among them, and always speak of it as a Feejee disease."

For this disease Dr. Fox states, they have several remedies, the most effectual of which are incisions over the painful part. To the ulcers no applications are made, except in the case of children, in whom they are scraped down with a shell and then rubbed with soot, which causes a rapid cicatrization. The general belief is that the complaint will run its course, but that it is aggravated by certain articles of diet, as pork, or sweet things. Dr. Fox treated several patients for this disease with sarsaparilla, and the application of *ung. citrin* with great success.

There is also another cutaneous disease prevalent among the inhabitants of some of the groups of islands in the Pacific, especially in the Kingsmill, known by the natives under the name of "gune." This at its commencement somewhat resembles ringworm, the spots gradually spread, and others form until the whole body becomes covered with them; when they pass off, the skin is left seamed with lines and circles of a livid hue, which continue during life. "At other times it assumes a more virulent character, in which case, large excrescences like warts form, first on the face, or between the fingers and toes, and then on other parts. The softer portions of the face and body swell to double their natural size; the person becomes unable to walk, or to move his limbs, until death at length overtakes and releases him from his sufferings."

In the Kingsmill group, the practice of infanticide prevails to a great extent, but not to the same degree as among the Feejee islanders. Captain Wilkes says: "A woman has seldom more than two and never more than three living children. After the birth of a third, they consider it necessary to prevent the increase of their families, and resort to that most unnatural means, a systematic abortion. So soon as a woman believes herself *enceinte* for the third or fourth time, she determines that the offspring shall not survive, and calls in the aid of an experienced midwife to destroy it, who effects the purpose by external pressure on the abdomen or back, and, though not unattended with much pain and difficulty to the mother, the operation rarely proves fatal. This practice is looked upon without any sort of horror or shame, being considered as a necessary and proper means to prevent their families from becoming so large as to be a burden to them, and not because the island might become overpeopled, for this latter idea does not seem ever to have occurred to them. The practice of destroying the fœtus is universal among the unmarried females, but children are never destroyed after birth."

It would appear that the practice of the profession among the natives of Oregon is by no means a safe one, as our author states that although they have great dread of their medicine men, and even of their remains after death, they frequently make the doctors pay the forfeit of their own lives, if they are not successful in curing their patients; and they also extend this *lex talionis* to whites who may prescribe for Indians, where their prescriptions are of no benefit. If this custom should continue to prevail in Oregon, medicine men will not be as plentiful as on this side the Rocky Mountains, nor will the profession be so overstocked.

Among these tribes also several customs are noticed which would seem to have been almost universal with our Aborigines. Thus, Captain Wilkes observes: "The customs of the Indians, in relation to the treatment of females, are singu-

lar. On the first appearance of the menses, they are furnished with provisions, and sent into the woods, to remain concealed for two days; for they have a superstition, that if a man should be seen or met with during that time, death will be the consequence. At the end of the second day, the woman is permitted to return to the lodge, when she is placed in a hut just large enough for her to lie in at full length, in which she is compelled to remain for twenty days, cut off from all communication with her friends, and is obliged to hide her face at the appearance of a man. After this she is required to perform repeated ablutions before she can resume her place in the family. At every return, the women go into seclusion for two or three days."

It is strange that a superstitious feeling with regard to the menstrual discharge, should have been universal among all nations; we find it noticed in the earliest records of the human race, and always in the same manner; being considered as something noxious, and as exercising a baneful influence on the male sex. The seclusion of the female during the continuance of her monthly discharge was as strictly enjoined by the Mosaic law, as by those of the Egyptians, or other nations of the old continent; and we find that the same regulation existed throughout the savage tribes of America. An investigation of this subject, if productive of no absolute benefit, would be extremely interesting; there must have been some cause for this universal dread of what is now looked upon as a salutary exertion and one essential to the health of the female.

The last extract we shall make is an account of a singular custom among the Nez Percés, as showing the wonderful power of the stomach in resisting the most powerful irritations. To enable themselves to endure fatigue, they prepare themselves as follows: "On the first day three or four willow sticks, eighteen inches in length, are thrust down the throat to induce vomiting; a hole is then prepared of a sufficient depth for a man to sit upright, with his head above the ground. On the second day, other sticks of an eighth of an inch in diameter, and of a length to reach from the mouth to the umbilicus, are passed down, and this process is continued until a burning sensation is produced in the stomach, the number of the sticks being diminished as the throat becomes sore; after this the patient plunges into cold water and remains there until evening, when he takes half a pint of porridge. On the third day he undergoes the same process. During the next four days he alternately takes hot and cold baths, eating very sparingly. This trying operation is commenced at the age of eighteen and is continued annually until about forty. The most remarkable circumstance is, that it would appear that this treatment is efficacious, and that instead of destroying those subjected to it, they are remarkable for their bodily powers." In these days of quackery, it will doubtless be adopted among us, and have as many followers as animal magnetism, hydrosudopathy or other modes of filling the pockets of the charlatan at the expense of his dupes.

We must now take our leave of these agreeable and instructive volumes, which will amply repay the reader, by the variety and importance of the information they contain,—narrated in a clear and unambitious style. The elegance with which they are got up both as regards their typography and their numerous illustrations, far excels any thing that has yet issued from the American press, and reflects infinite credit on the country. We look with much interest for the reports of the scientific corps, trusting that they will soon be laid before the public, in an equally magnificent manner.

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ART. XIV.—*An Essay on the Philosophy of Medical Science.* By ELISHA BARTLETT, M. D., Professor of the Theory and Practice of Medicine in the University of Maryland. Philadelphia: Lea & Blanchard, 1844: 8vo., pp. 310.

ESSAYS on the philosophy of Medical Science are as valuable now as they have been in earlier periods of the history of medicine. Notwithstanding many discoveries, and although the means of exploration and the number of medical agents are being constantly increased by them, we have still to lament that a

blind empiricism prevails very widely, and that a considerable portion of the community seek for relief from disease and suffering from popular nostrums, and at the hands of practitioners who know not, and who, in their ignorance, despise the beaten paths of science and of art. In view of these facts, it is customary to dwell at large on the credulity of human nature and its love of the marvelous, and we must admit, that all this is concerned with the state of things to be deplored. Other causes however, such as the imperfections of our art, and the mistakes of its professors, are more profitable subjects for consideration, inasmuch as we have more control over them, and if we but learn how to proceed, we can labour to remove them.

Dr. Bartlett's book, then, seems to us to have been published very opportunely. He professes to discuss the imperfections of our science, which are attributable to an erroneous method employed by those who have sought to advance it. His reputation as an experienced practitioner and teacher of medicine, gives us assurance that his views must be those of a practical man, and that his opinions will not be crude, nor his ideas hastily thrown together.

That all physical science consists in ascertained facts, phenomena or events, the whole classified and arranged, is the first proposition maintained by Dr. Bartlett. He very properly begins with physical science and devotes to it the first part of his essay. What is true of physical science in general, must be true also of medical science, and the proper method of pursuing them both must be the same. One unacquainted with the history of medicine, might doubt the necessity of writing a treatise, the main object of which, is to illustrate and defend so obvious a truth as is contained in the above proposition, and yet it is undeniable, that practically, medical men have wandered widely from the course in which respect for that truth would have compelled them to proceed. Instead of using those faculties of observation which were given man to enable him to find out the laws which govern the universe, so called philosophers have been in the habit at all periods, of resorting to other faculties, and calling fancy and imagination to their aid, and of displaying their ingenuity in the invention of processes and mechanical contrivances. Physiologists have given us any number of hypotheses, and have set forth at great length, and with great complacency, how all the functions of the economy can be carried on and sustained, and have not even stopped, where they were obliged to confess their ignorance of the structure of important organs. The powers of imagination, and the ingenuity displayed by pathologists in their expedients for producing the phenomena of disease are equally remarkable. How many and how various the hypotheses, according to which, the phenomena of continued fever may be produced! Creation, after all, would not be so wonderful an exercise of power, if we could believe that all the processes of the economy, in health, and in disease, could be carried on in such numerous and various ways as are described in the writings of physiologists and pathologists. It is surprising that so many people die in spite of the many and infallible remedies, the efficacy of which is vouched for by witnesses so positive and so confident. It is often told of Newton, that he once spoke of himself as a child gathering a few pebbles on the shore of the great ocean of truth, and we could wish that such humility characterized more frequently the writings of scientific men. There are some writers, who have even gone so far as to maintain that observation is but an inferior exercise of the intellectual powers, and they attempt to describe a mode of reasoning out truth, which they hold up as nobler and higher than the patient and continued endeavour to look into life as it is. It is related of John Hunter, that he was once seen by his servant, standing for hours over a subject, without change of posture, a scalpel in one hand, pressing on the body, and lost in thought, in an endeavour to understand the mechanism of certain organs which he had been examining. Such an earnest gazing at truth cannot be a favourite method with the writers to whom we have alluded. With them, imagination leaps at results and devises processes by a sort of inspiration, with infinitely less labour. Such men evidently aspire to the possession of creative powers, and seem to have listened to the suggestion made by the great enemy of man to our first parents, "Ye shall be as gods." They scorn patient labour, and certainly can possess none of that humility and reverence for which all successful seekers after truth have been remarkable. Surely, we need hardly apolo-

gize for thus glancing at the obliquity of man's moral nature as an obstacle to the advancement of truth, for how can we otherwise account for the many instances in medical works, of an obstinacy that will not see the right, and of a deliberate preference for error and falsehood. Some statement of this kind is the more necessary, because there are writers who attribute to all advocates of the use of numbers in medical science, an opinion that the numerical system is a sort of machine which is to set all things right, by the use of which error and mistake become impossible, the necessity for intellectual exertion is removed, and no occasion is offered for the exercise of the higher faculties of our nature. We will not deny that there are some who have written on the subject so as to lay themselves open to such a charge, but Dr. Bartlett cannot be placed in their number.

In his essay, the numerical system is spoken of as an instrument to aid in the pursuit of truth—the use of which is to be learnt only by the study and persevering employment of the higher faculties; and which, in the hands of the ignorant, the incapable and the dishonest, may mislead and deceive only the more from the appearance of exactness borne on the face of its results. And what Dr. Bartlett has said on this subject, would have made more impression on certain minds, had he recognized more clearly the existence of intuitive powers, by which truth is often discerned, sometimes dimly and at a distance, before it can be shown to others, in such a way as to produce conviction. Sir Isaac Newton, in his meditation on the fall of the apple, saw the principle of gravitation, and, as it were, partly by its light, worked out laws and principles which were more fully developed to the world in the Principia. We certainly believe that in medicine such a course has not been unfrequent. In our own day, for instance, the incident and reflex actions of the nervous system have been fully set forth by Dr. Marshall Hall, though their existence was recognized by Whytt and other earlier observers. The connection of pericarditis with rheumatism was noticed in the latter part of the last century, but a great deal has been done within a few years to throw light on the subject and to give certainty to our knowledge. John Hunter seems to have had glimpses of many truths which have been established and demonstrated by subsequent observers. This faculty, however, of discerning the truth is comparatively a rare gift. Most of us must be content to arrive at truth by a more circuitous and less direct route. In fact, there are few who are not more or less in danger of mistaking what they imagine for what they see, and of reporting to others as facts the fictions of their fancy. Mental obliquity is not a very rare disease, nor is a perfectly achromatic mental lens at the service of every man. The process of generalization is not safe for the many who endeavour to use it. A writer in a recent number of a popular review on the subject of education, who claims only to re-collect and re-present old truths, says, "that many people seem to think that all knowledge consists in acquiring and using certain abstract ideas, which, after all, is no knowledge at all, for God and nature gave us no such things to study. They are but the spider's web of our own brain." We cannot go far in the history of medicine without finding confirmation of the justice of this remark. Cullen and Brown certainly were men of no ordinary intellectual powers, and yet must not their theories of fever be considered as abstract ideas which existed only in their own minds, and which, having been mistaken for the truth, have exercised a pernicious influence on the practice of medical men? Broussais, in his later years, with his abstract ideas of irritation and inflammation, which were the cause of such a profuse expenditure of blood, affords another example, and Dr. Bartlett very properly dwells on his history at some length. The theories of Gallup and Miner and Thompson, and those of the disciples of Hahnemann are instances in our own country of a generalization resulting in abstract ideas of disease to the infinite prejudice of patients. Now will any question the utility of dwelling on mistakes which have been and are so frequently committed? Shall there not be, as it were, charts of medical science, on which shall be marked distinctly the rocks and quicksands that have been fatal to many a voyager? We may regard Dr. Bartlett's essay in this light—all the branches of medical science, anatomy, chemistry, physiology, pathology, therapeutics are reviewed by him, and he endeavours to show their connection and how far one branch may be said to be founded on another. Two chapters are devoted to diagnosis, one chapter is taken up with a discussion of the principles of classification

of diseases, and in the concluding chapter are discussed the future prospects of medical science, the probable extent of our power over disease, the American French and English schools of observation. It is apparent even from so brief and imperfect a statement of the contents of Dr. Bartlett's book, how much ground he goes over. It is not our purpose to follow him, nor to criticise minutely the views and opinions advanced by him. To do this, and to be just to the subject and the author, would not be possible in the prescribed limits. We can only imitate the traveler, who, after the completion of his tour, commits to writing some of the impressions produced on his own mind, with the thoughts suggested to him by the scenes and circumstances amongst which he has been thrown. Our readers may perhaps judge in this way as easily, whether it be worth their while to go over the same ground as after a more elaborate description. Of course, all will not find that Dr. Bartlett has surveyed the field of medical science from their own favourite points of view. His volume is but an octavo of some three hundred pages, and such a subject as the philosophy of medical science cannot be exhausted in that space. Yet whatever faults of omission or commission may be detected by the critical reader, we are persuaded that no man of an honest or candid mind will regret the time spent in making himself acquainted with the author's views. No one can proceed far in the perusal of the work without being convinced that the writer has thought much and well, and has expressed himself clearly and forcibly. The book is a credit to the medical literature of our country, and for the sake of the profession we hope that it will meet with a wide circulation.

G. C. S.

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ART. XV.—*General Report of the Royal Hospitals of Bridewell and Bethlem, and of the House of Occupations, for the year ending 31st December*, 1844. London, 1845: pp. 112.

DURING the last few years the Bethlem Hospital for the Insane has made gigantic strides in the way of improvement. It now undoubtedly deserves to be classed among the very best of pauper institutions for the treatment of mental disorders. The extended notice which we gave of the report for 1843 precludes the necessity of entering at length into the details of that which is now before us. The following table includes the most important statistics for the year:

| | Curables. | | | Incurables. | | | Criminals. | | | Totals. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Males. | Females. | Total. | Males. | Females. | Total. | Males. | Females. | Total. | Males. | Females. | Total. |
| In hospital January 1st, 1844, | 72 | 109 | 181 | 34 | 50 | 84 | 70 | 20 | 90 | 176 | 179 | 355 |
| Admitted during the year, | 118 | 168 | 286 | 5 | 3 | 8 | 10 | 1 | 11 | 133 | 172 | 305 |
| Whole number, | 190 | 277 | 467 | 39 | 53 | 92 | 80 | 21 | 101 | 309 | 351 | 660 |
| Discharged cured, | 58 | 70 | 128 | 0 | 0 | 0 | 2 | 2 | 4 | 60 | 72 | 132 |
| Died, | 6 | 13 | 19 | 1 | 3 | 4 | 5 | 0 | 5 | 12 | 16 | 28 |
| Remaining December 31st, 1844, | 77 | 114 | 191 | 37 | 50 | 87 | 73 | 19 | 92 | 187 | 183 | 370 |

Patients admitted during 100 years, ending Dec. 31st, 1843, 17,803.
" discharged cured, " " " " 7,108, or 39·86 pr. ct.
" died, " " " " 1,799, or 10·10 pr. ct.

| | Males. | Females. | Totals. |
|---|---|---|---|
| Curable cases admitted during the last 25 years, | 2,180 | 3,221 | 5,408 |
| " cured " " " | 1,021 | 1,715 | 2,736 |
| " died " " " | 132 | 146 | 278 |
| Per centum of cures, | 46·83 | 53·12 | 50·59 |
| " of deaths, | 6·05 | 4·52 | 5·12 |

Hence it appears that the recoveries, *in cases considered as curable*, was a fraction more than 50 per cent. The question is often asked, whether the patients of one sex are more curable than those of the other? The cures of females, according to this table, exceeded those of males by 6·29 per cent.

The facilities for the moral treatment of the patients at Bethlem have been increased, and a regular system of labour is so far introduced that about *two-thirds* of the patients are constantly employed.

"Personal restraint," says the report, "has been reduced to one-tenth of what it was six years ago; and it is most gratifying to be able to state, that it has been reduced during this year to one-half of what it was in 1843."

"It is almost unnecessary to say that restraint has diminished just as the means of occupation and amusement have been increased, and that without such means and appliances it would be injudicious to attempt to dispense with mechanical restraint."

In the diminution of restraining apparatus to the minimum required by true philanthropy; in the establishment of a system of regular manual labour; and last, though perhaps least, in the publication of an elaborate report in a style indicative of the perfection of art, the government of Bethlem hospital has set an example which, it is to be hoped, will be followed by those concerned in the management of other kindred institutions. P. E.

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ART. XVI.—*Vital Chemistry.—Lectures on Animal Heat.* By THOMAS SPENCER, M.D., Professor of the Institutes and Practice of Medicine in the Medical Institute of Geneva College 12mo., pp. 114. Geneva, 1845.

SINCE the attention of physiologists has been directed to the subject of vital chemistry, and its agency in the production of the phenomena of organic life, by the promulgation of the ingenious, and from their simplicity and apparent truthfulness, very captivating theories of Liebig, we have been presented with several publications, in which attempts are made to explain, upon purely chemical principles, the functions of digestion, chylosis, hæmatosis, and nutrition.

The examination of the laws and products of vital chemistry is unquestionably calculated to lead to very important results, provided it be conducted in a right spirit, and with a constant recollection that the changes, whether of composition or decomposition, which take place in the living organism, although governed by strictly chemical laws, are nevertheless under the control of life, in whatever we may suppose this latter to consist; and that, although chemical changes act a very important part in the production of the organic phenomena, they are not the sole cause of these phenomena, and are, to a very great degree, directed and controled by the vitality of the organism; and hence, that the laws and results of vital chemistry are to be studied, not in the laboratory, but in the living body alone.

The work of Dr. Spencer, the object of which is to investigate the vital chemistry of respiration and hæmatosis generally, with a view to determine the source of animal heat, is one deserving of a close study. His manner of investigating the subject is perfectly logical, so that, admitting the accuracy of his premises, most of his conclusions necessarily follow. We have only to regret that he has been urged into a somewhat hasty publication of his views; that he has not taken time to elaborate them more fully, to fortify, with more numerous facts and illustrations, his several positions, and to fill up and complete the mere sketch which he has now presented. He would, in this manner, have done greater justice to himself, and succeeded more fully in convincing his readers of the truth of his views.

To give a general idea of Dr. Spencer's theory of animal heat, we present his conclusions, as drawn up by himself.

"The following summary may be presented of the reciprocal chemical changes of the blood in the capillaries of the lungs and system, and the *connection* of respiration with calorification:

"1. The lungs perform an excretal office, on which life constantly depends, because directly and indirectly aiding calorification.

"2. The substance thrown off is hydrate of carbon.

"3. The carbon, on coming in contact with atmospheric oxygen, combines with

it, forming carbonic acid gas, which is thrown off from the lungs and skin by expiration and perspiration.

"4. The amount of latent heat of the oxygen gas employed, is much greater than that of the carbonic acid gas formed in the lungs, and hence, caloric is set free, imparting heat to the blood and surface.

"5. This free heat also combines with the water of the hydrate of carbon, and converts it into vapour.

"6. The lungs and cutaneous surface aid in *regulating animal temperature* by the conversion of water into vapour, thus conveying off any excess of free caloric in the system by combining with it in the form of latent heat.

"7. The water of the hydrate of carbon is converted into vapour in the lungs and upon the surface, precisely as when wood is burned, and hence assumes the form of insensible respiratory and perspiratory transpiration.

"8. Facts appear to show that the chemical change in both venous and arterial blood may occur, independent of the vital principles, by applying to the venous, oxygen gas, and to the arterial, carbonic acid gas.

"9. The systemic red capillaries are the antagonists of the pulmonary, and are constantly decomposing carbonic acid, and with water forming hydrate of carbon; or, in other words, carbonizing the blood.

"10. From this union, water and carbonic acid are transformed into a solid substance, and hence, latent, becomes free heat, at every point where red blood circulates.

"11. The functions of the systemic red capillaries of the body in *decomposing*, and that of the small vessels of the lungs and skin in *recomposing* carbonic acid gas, reciprocally depend upon, and *balance* each other; in other words, one set *carbonizes*, the other *decarbonizes* the blood.

"12. In consequence of the indissoluble link which connects the functions of respiration and calorification, the degree of temperature, the carbonic acid evolved, and the size of the lungs as compared with the bodies of animals, always bear a direct ratio to each other.

"13. There is a beautiful analogy between animals and vegetables, in the decomposition of carbonic acid by the minute vessels of each.

"14. This explanation shows that the great end and function of respiration is, both *directly* and *indirectly*, to aid in the all-important office of the generation and diffusion of animal heat."

The theory of respiration adopted by Dr. Spencer differs, as he remarks, essentially from that of Lavoisier, Laplace and Prout, which supposes carbon and hydrogen, or hydro-carbon, to exist in the blood, and that both become oxidized by respiration. "Hydro-carbon is a mere imaginary compound, which was necessary to complete their theory, while hydrate of carbon, as the author has shown, is an extensive triple compound."

According to Dr. Spencer, "the lungs are not only employed in the functions of *excretion* and *calorification*, in expelling and oxidizing the carbon of the hydrate of carbon, but are the last of the organs of *hæmatosis*, viz:

"1. In decarbonizing the chylous and other constituents of blood, thus fitting them for nutrition.

"2. This decarbonization of the elements originally entering the animal as food, furnishes the carbon of carbonic acid, and the hydrate of carbon employed in the function of calorification.

"3. That the oxides of iron are the first instruments for oxidizing and deoxidizing carbon as the important agent in calorification, while atmospheric oxygen is the last agent.

"4. The protoxide of iron is the carrier of the carbonic acid from the lungs to the systemic capillaries.

"5. The affinities of the iron in its circle for calorification show, that if either oxide exists as a constituent of blood, the other oxide must necessarily be formed; the *pulmonic* and *systemic* capillaries antagonizing and balancing each other, in oxidizing and deoxidizing these compounds.

"6. The iron of the blood is originally derived from vegetables in the form of oxide of iron.

"7. This oxide of iron is converted into perchloride of iron by the muriatic acid of the gastric juice, and thus rendered soluble.

"8. The perchloride of iron is reconverted, in the lungs, into the hydrated peroxide of iron by the free soda of the blood.

"9. The hydrated peroxide is converted into the protoxide in the lungs, by oxidizing the carbon of the nutritious fluids.

"10. The protoxide carries carbonic acid thus formed to the systemic capillaries for calorification, and is there reconverted into hydrated peroxide.

"11. In the series of chemical compositions and decompositions of iron and carbon as explained, an exact balance is preserved in the amount of each at all points of the organism, where employed for calorification.

"12. The oxides of iron are, *probably*, employed in *oxidizing* and *deoxidizing* various other compounds than those already considered.

"13. In deoxidizing sugar, &c., to form animal fat, and in oxidizing the carbon of the fat for calorification."

The foregoing propositions present a general view of the doctrines of our author in relation to respiration and calorification; they press themselves upon the attention of the physiologist by their simplicity and apparent strict accordance with numerous well established facts in relation to the chemical constitution of the components of the animal organism, and demand a cautious and candid examination on the part of all who have the time and talents required to test their accuracy. If, as the author very candidly remarks, every step of his inquiry shall be found to be fortified by ascertained facts, and his deductions to have been legitimately drawn, he has succeeded in pointing out and determining "a circle of vital affinities, uniting all the structures and functions of the organism, and making each set of capillaries mutually dependent on, and balanced by others, in the chemico-vital changes produced in their passing currents of blood." "That such a series exists," he adds, "and that the links in the chain may be demonstrated, cannot be doubted; but in view of the intricacy of the subject, and of my limited knowledge of experimental chemistry, a due distrust is still felt in the accuracy of the attempted determination."

Besides the main subjects referred to in the summary we have given of Dr. Spencer's lectures, they contain a number of interesting suggestions on many interesting questions connected with the physiology of assimilation and nutrition.

D. F. C.

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ART. XVII.—*Summary of the Transactions of the College of Physicians of Philadelphia*, from November, 1844, to March, 1845: 8vo. pp. 70.

THE publication before us embraces a summary of the Transactions of the Philadelphia College of Physicians for five months, and contains a very considerable amount of interesting matter. It comprises the annual reports on surgery, on meteorology and epidemics, and on the diseases of children, besides several instructive cases communicated to the college, and a well drawn up biographical memoir of the late Dr. J. C. Otto.

The annual report on surgery by Dr. Parrish, though not presenting, as might be expected, a summary of the improvements in surgery during the preceding year, still furnishes some exceedingly interesting information. The chief topic of the report is the subject of the accidents resulting from the riots in Kensington and Southwark, in May and June of last year.

Fourteen of the cases wounded in the above riots were admitted into the Pennsylvania Hospital; and the following table furnished by Dr. Logan gives some interesting details respecting these cases.

| Date of admission. | Name. | Age. | Nature of wound. | Date of death. | Date of discharge. | REMARKS. |
|---|---|---|---|---|---|---|
| May 6 | Joseph Cox | 24 | Gunshot of abdomen | May 21 | | The ball (apparently from a pistol) entered the left groin, and was found after death, loose in the cavity of the pelvis, having traversed the viscera without any apparent wound. Died of peritonitis. |
| May 7 | John Fagan | 23 | Gunshot of shoulder | | June 19, cured | The ball (rifle) entered the top of the left shoulder, penetrated the supra spinatus and infra spinatus muscles, the spine of the scapula, and came out below its inferior edge. After he left the hospital, a considerable number of spiculæ of bone were discharged. |
| May 7 | John M'Aleer | 35 | Gunshot of thumb | | May 9, by the public authorities | The thumb was carried away by a ball. The first phalanx was fractured and afterwards removed. |
| July 7 | Jas. Linsenbigler | 19 | Gunshot of abdomen | July 8 | | The ball (of a large size) entered the right groin, and passed out of the ischiatic foramen of the opposite side. He never fairly reacted. |
| July 7 | Thos. Saunders | 19 | Gunshot of chest | July 9 | | The ball (musket) entered the chest, one and half inches inside and above the left nipple. It was extracted two inches to the left of the spine, and one inch above the inferior extremity of the scapula. Complete reaction took place two hours after his admission into the hospital. No *post-mortem* examination was made. |
| July 7 | David Kithcart | 19 | Gunshot of abdomen | July 10 | | The ball (of a large size) entered three inches to the left of the umbilicus, and passed out at the same distance to the right. There was a protrusion of several feet of the small intestines. The wound was dilated and the intestines returned. He died of peritonitis. |
| July 7 | James Barr | 18 | Gunshot of arm | | Aug. 2, cured | This was a mere flesh wound, most probably from a musket ball. |
| July 7 | John Huested | 23 | Gunshot of arm | | Aug. 2, cured | This also was a mere flesh wound. |
| July 7 | James Tully | 36 | Gunshot of forearm | | Sept. 14 | This was a flesh wound from a large ball. The cure was retarded by the inflammation extending down the fascia of the forearm. |
| July 7 | Hen. Troutman | 30 | Gunshot of groin | July 8 | | The slug entered the left groin, severing the femoral vessels, and passed out the ischiatic foramen. He never reacted. |
| July 8 | Elijah Jester | 32 | Gunshot of chest | July 12 | | The slug entered the left side of the chest, fracturing the second rib, close by the sternum, penetrated the upper portion of the lung, and lodged in the cavity of the chest. |
| July 7 | Jas. Crawford | 18 | Gunshot fracture of the head of humerus | | Aug. 20, cured by amputation | The bone was shattered by a canister or grape shot. The arm was amputated at the joint. |
| July 8 | Edward Lyon | 25 | Gunshot of arm | July 24 | | The slug entered the front of the arm, passed through the axilla, inside of the vessels, (they being thrown out by the raised position of the arm,) and was extracted outside of the external edge of the scapula. He died from absorption of pus, his lungs being covered with metastatic abscesses. |
| July 7 | Wm. Manning | 19 | Gunshot fracture of femur | | Remains under treatment | The ball (musket) passed through the right thigh without fracturing the bone, entered the left, and made a comminuted fracture of the os femoris. The ball was completely flattened against the bone, being afterwards extracted. He is now doing well, and has every prospect of having a good serviceable limb. |

But one of the cases, it will be observed, in the preceding table, required amputation, and that was successful. "The urgent necessity," Dr. Parrish ob-

serves, "for immediate amputation after the establishment of reaction, in all cases of severe gunshot wounds of the limbs, attended with comminuted fracture of the bones, especially where joints are involved, is warmly advocated by the most authoritative writers on military Surgery. In the case of Crawford, there was a comminuted fracture of the neck and head of the humerus, requiring amputation at the shoulder-joint. The operation was performed by Dr. Norris about two hours after his admission, and fifteen hours after the reception of the injury! The result was as stated, and the patient was discharged, cured, on the 20th of August.

"In the case of William Manning, an attempt was made to save the limb, contrary to the generally received doctrine in such cases. The result is particularly interesting, as forming an exception to a general rule. All agree that gunshot fractures of the thigh are attended with great danger, and are, in the larger proportion of cases, fatal; and that the necessity for immediate amputation is imperative. On this point, the following strong remark is made by Guthrie:—'Upon a review of the many cases which I have seen, I do not believe that more than one-sixth recovered, so as to have useful limbs; two-thirds of the whole died either with or without amputation, and the limbs of the remaining sixth were not only nearly useless, but a cause of much uneasiness to them for the remainder of their lives.' This opinion is confirmed by Hennen, who asserts that, without having made any accurate calculations, he is strongly inclined to assume Mr. Guthrie's estimate as correct; 'even including the cases of officers, who are not subjected to the risks encountered in crowded hospitals; in these situations, says he, the cases which I have witnessed have, on some occasions, been deplorable. Not a single case has done well where amputation was deferred, and even where it was performed, two out of three have died. In other instances, the losses have not been so severe; but I have never known a larger proportion saved than that assigned by Mr. Guthrie.' (*Principles*, 3d ed., p. 110, Lond.) The testimony of the French army surgeons tends to the same conclusion. Baron Percy states, that scarcely two in ten of such cases recover. Ribes, who has never seen a single cure, gives ten examples, which, despite of every possible attention, proved fatal. Dupuytren, when giving the result of his long experience in compound fracture, says—'On one point my opinion is unchangeable—on rejecting amputation in them, particularly when produced by gunshot wounds, more lives are lost than limbs saved.'

"Notwithstanding these eminent authorities, the surgeons of the hospital determined to make an effort to save Manning's limb. His youth, temperate habits, and good constitution, were all in his favour, and rendered the case more hopeful than usual. The result appears likely to meet their most sanguine anticipations, and, should he recover with a good limb, his case will furnish an important addition to our experience on this interesting subject. The result is, perhaps, mainly attributable to his youth, as it is found that nearly all the cases of recovery after compound fracture of the thigh, whether produced by ordinary accidents or by fire-arms, are in persons under age."

Several cases which occurred in the private practice of the reporter's friends, are also detailed. The following brief details are furnished by Dr. Norris:

"Among the wounded at the Kensington riots, the case of A. R. P. deserves notice, from the successful issue which followed speedy amputation. This individual received a slug wound on the evening of May 7th, while on the ground at Kensington. He was struck about the middle of the arm, the slug passing through the limb, with extensive laceration of the soft parts, and producing a frightful comminuted fracture of the humerus; the bone being splintered so far up, as to make it necessary to amputate very near to the shoulder.

"The patient, who lived in the lower part of the city, did not reach home until late at night, and about midnight Dr. Norris saw him. He found him suffering extreme pain; much exhausted from loss of blood and from abstinence, as he had not eaten any thing since morning. Amputation was immediately performed. No unpleasant symptom followed, and Dr. N. ceased his attendance in about three weeks."

The following case fell under the care of the reporter and Dr. Remington, and

is worthy of notice from the fact of the perfect restoration of a limb after a pistol shot, which penetrated the thigh, and fractured the femur just above the condyles:

"M. H., a stout muscular man, aged about 25 years, while marching in the ranks of a military company to the scene of the riots in Kensington, on the afternoon of the 8th of May, was shot by the accidental discharge of a six-barreled revolving pistol, which dropped from the belt of an officer of the company, who was marching about twenty feet in the rear of him.

"The ball, passing between the men who were marching behind the patient, struck him upon the inside of the leg, while in the act of raising the limb to make a step. It entered just opposite the head of the tibia, a little below the knee-joint, and passing obliquely upwards and outwards, it struck the os femoris, about an inch and a half above its articulating surfaces, producing an irregular fracture, with lateral deformity and slight shortening of the limb; without, however, an entire separation of the bone, throughout its whole breadth. A ragged edge of bone could be felt under the skin on the outer side of the thigh—and the patient suffered extreme pain from the least motion: no appearance of the ball could be detected.

"The treatment consisted in the application of Desault's splint, as in ordinary fracture of the femur. Tr. opii gtt. xx were directed every four hours, or oftener if the pain was severe; and a lotion of lead-water and laudanum was freely applied to the limb with wetted compresses. On the 9th, the limb was much tumefied and painful, although the patient had intervals of comfortable sleep, and was free from fever. One hundred American leeches were directed to the limb, and the lotion to be continued. On the 10th, the swelling had subsided, and the pain was less severe; he was directed a saline cathartic, and continuance of the other treatment. From this period no unusual symptom occurred, different from an ordinary case of fractured thigh.

"The parts traversed by the ball healed up without suppuration, and, at the end of two months, the patient was allowed to give slight motion to the limb. He recovered with a very slight limp, and experiences no other inconvenience at present, except that the limb is at times painful from changes in the weather. The ball has not yet been discovered. The favourable issue of this case is probably attributable, in a great measure, to the small size and smooth surface of the bullet, which is not larger than the largest sized buckshot, to the velocity with which it entered, and to the unusual thickness of the bone at this point. The patient, also, was young, of a remarkably fine constitution, and of temperate habits."

The following case furnished by Dr. Ashmead, has some points of resemblance to that just mentioned, while the result was equally gratifying:

"T. S., aged about 45 years, was wounded at the Southwark riot on the 7th of July. He was struck by a bullet on the outer and inferior edge of the patella, fracturing its lower half into four or five frag ments,the upper half remaining entire. The ball wound around the head of the tibia, and came out at the edge of the popliteal space behind; then entered the internal surface of the left leg, passed through the gastrocnemii muscles, and emerged externally, without injury to the bones. The cavity of the right knee-joint was of course opened. The patient immediately fell, although he experienced no pain: there was considerable hemorrhage from the wounds.

"Dr. Ashmead saw him in about 5 hours: he immediately dressed the wounds with lint, smeared with simple cerate, and over this a poultice, avoiding most carefully, throughout the treatment, the access of air to the cavity of the knee-joint. The fractured limb was placed on a straight splint, and kept at perfect rest; and anodynes were ordered at short intervals. On the following day, the right limb was much tumefied, although without severe pain. The patient had twitchings in his sleep, tympanitis, loss of appetite, and general restlessness: and, for ten days, the danger of tetanus appeared to be imminent. During this period, opium was freely administered, with stimuli and nutriment—and the patient escaped. After this he improved rapidly, and at the end of four weeks, was able to sit up, and was allowed to give slight motion to the joint.

"When last seen, November 1st, he was found to have as free use of the limb as is usual after ordinary fracture of the patella—a firm ligamentous union having taken place between the fragments. The circuitous course of the ball, passing

around the head of the tibia, and traversing a route of four or five inches without entering the joint, was remarkable—as was the recovery of the use of the limb to its present condition, without serious inflammation and stiffening of the joint."

The following case, mentioned by Dr. Condie, exhibits a curious instance of the circuitous route occasionally taken by balls, without inflicting serious injury:

"A person (W. A., residing in Southwark) led by curiosity to visit the scene of the riots in Kensington, whilst in the vicinity of the firing by the mob, received a musket-ball in his left hip. He immediately fell, and was at once conveyed home by his friends. Dr. Condie was sent for, the messenger informing him on the road that Mr. A. had been shot through the body. On arriving at the residence of the wounded man, the doctor was surprised to find neither in the countenance, pulse, nor temperature of the patient's surface, any thing to indicate that he had just received so serious an injury. On examination, he found, directly over the great trochanter of the left femoris, a wound indicating the place of entrance of a ball, and on the left side, between the great trochanter and the anterior superior spinous process of the ileum, another wound where the ball had made its exit. The patient was able to rise up and support himself in the sitting posture without any difficulty or pain; and, on being requested, stood on his feet and walked some steps, with no other inconvenience than arose from a sense of constraint or stiffness at the hip-joints; a feeling, as he expressed it, as though he was encompassed there with an iron band. The simplest dressings were applied, and a dose of Dover's powder administered to the patient. He rested well that night, and on the ensuing morning, the nature of the injury he had received was rendered very evident by a broad red streak, extending from the two wounds around the back. The ball had passed beneath the integuments, from its place of entrance on the left side, across the posterior part of the body, to the right side, where it made its exit. The wounds were healed, and the patient was entirely well within three weeks from the date of his accident."

The report on epidemics by Dr. Moore, and that on the diseases of children by Dr. Condie, are both very interesting, but they need not detain us, the former not admitting of analysis or presenting any very prominent points for notice, and nearly all the facts embraced in the latter having already been presented to our readers in the previous numbers of this journal.

A case of remittent fever, followed by symptoms of cerebral disease of a very peculiar character, was communicated by Dr. Condie. The subject of this case was a female, 35 years of age who had been attacked with remittent fever. By appropriate treatment, on the 6th day (Oct. 6) the fever was entirely subdued; all pain had disappeared; the pulse had become of a normal frequency, and slow; somewhat full, but perfectly soft; and the skin was cool and moist; but instead of full convalescence ensuing, the patient fell into a condition marked by symptoms of a very peculiar character. She lay upon her back perfectly motionless, her limbs relaxed, her eyes and mouth wide open, and the countenance devoid of all expression. The eyes presented a perfectly natural appearance—the pupils contracted and dilated according as they were exposed to more or less light, and the adnata was free from the slightest appearance of injection; the balls were perfectly immovable. The pulse, in general, rather slow—full and soft—occasionally slightly accelerated, but never tense or contracted; it, in no instance, rose above 84, or sank below 60. There was evidently some dullness of hearing, but when spoken to in a loud tone, by persons with whose voice she was familiar, she heard and evidently understood whatever questions were put to her, to which she replied correctly by motions. When directed to move her limbs in any direction, she did so readily, but very slowly; when told to close her eyes or mouth, she strained them more widely open—and when requested to protrude her tongue, she drew it forcibly backwards; when asked if she experienced pain, she replied invariably by a negative motion of the head; but when the question was put to her whether she desired drink or food, to the first she generally replied by an affirmative nod—and to the second, occasionally by a negative motion; when fluids or food were placed first within the mouth, she made no effort to swallow, but when they were introduced far back towards the root of the tongue, fluids were swallowed at once, and without the slightest difficulty. Certain articles of diet and medicinal substances, introduced in the same manner, in place of being swal-

lowed, were pushed forwards by the action of the fauces, and the patient made motions to have such of them as were not sufficiently fluid to run out of the open mouth, removed by those around her. The face became flushed, and of a dusky red, and somewhat swollen, generally about two o'clock in the afternoon and towards eight in the evening; at other times it was pale and expressionless. The skin remained throughout all periods of the day soft and of a natural temperature; the temperature of the hands and feet, however, was uniformly and considerably diminished. The tongue slightly coated—dry, and of a dark colour in the centre, but otherwise soft and flabby, and neither unusually red nor pale. The patient was but little emaciated. Cups to the head—an active purge, followed by a pill three times a day of blue mass, ipecac. and rhubarb—sinapisms to the extremities, and a blister to back of the neck, were directed.

The report two days after states, that the patient is conscious of the calls to stool, and at such times makes motions to be assisted out of bed; and passes her urine freely. Three days subsequently, however, she lost her power of urinating, and it became necessary to empty her bladder by a catheter: a brisk purgative, infusion of valerian, sulph. quiniæ gr. ij, assafœtid. gr. iij, every three hours, were ordered. Four days afterwards the patient regained her ability to pass her urine, and took some light nourishment, and from this time she commenced to improve, but she continued perfectly mute. On the 30th October the patient attempted to articulate words, and laughed heartily at the awkwardness of her attempts, and the mistakes she frequently made in substituting one word for another; is unable yet to utter more than single words, and those very imperfectly. From this time she improved rapidly, and on the 5th November she was able to converse fluently.

The following case of luxation of the femur into the foramen ovale, resulting from disease of the hip-joint, is interesting from the perfect cure which was effected:—

A German girl, 8 years of age, whose general health was good, received on the 13th June, 1844, a slight fall on both knees, by which both were bruised, but especially the right, which three days afterwards became swollen and painful; these symptoms disappeared, however, in a week. About the beginning of July it was observed that the patient walked rather awkwardly on going up stairs; and, by mere accident, it was noticed that one leg was somewhat longer than the other, and that one hip projected more than the other. Rest and bathing were employed for some weeks. About ten weeks from the first fall she received a second, which was also followed by severe pain in the knee. Two weeks after the second fall she received a third and severe fall on her right side, immediately followed by severe pain about the groin. She could not rise; her right ankle was also sprained.

Three weeks after this injury (Oct. 1) she was first seen by Dr. Ashmead. He found the patient lying on her back, with a thin, sallow, distressed countenance; some pain and uneasiness about the hip; no fever; sleep disturbed; bad appetite. Right foot slightly rotated outwards, and the whole limb lying off from the other (abducted) and elongated about one and a quarter to one and a half inches; incapable of flexion on pelvis; rotation, adduction, or any further abduction could not be effected without resistance and the production of pain; the limb seemed to be fixed immovably in its present position.

Anterior face of thigh, at its upper third, evidently increased in the transverse diameter, and strikingly flattened, having lost the prominent anterior rotundity of the left. At the groin there was considerable tenderness on slight pressure; and instead of the natural hollow slope, there were a general fullness and firmness, without the rounded head of the femur being distinctly felt; two elevated points, and a gently rounded fullness of the head were, however, perceptible on either side of the acetabulum, and which were supposed to indicate the position of the bone. The plane of the shaft of the femur was on a higher level, and the trochanter major more anterior, than that of the opposite limb.

On the outer face of the thigh, the parts about the trochanter major were flattened laterally, not having the lateral bulging fullness of the left side, and a deep hollow existed in place of the trochanter; this being much nearer the median line than natural.

On the internal face, the soft parts seemed to encroach upon the labia, as if a greater fullness than natural existed there.

*Diagnosis.*—Luxation inwards and slightly upwards into the foramen ovale, with chronic disease, and filling up of the acetabulum. The patient was in apparent health when she received the first fall, after which she complained of the knee; limb slightly elongated: fell a second time; knee worse; general health bad; limb more stiff and more elongated: third fall on side, with a twist of the foot; feeling of severe pain in the hip; inability to rise or sit up in bed, with appearances as above: hence the inference was that she laboured under coxalgia, which, slowly progressing, occasioned a filling up of the acetabulum, elongation of the ligaments of the joint, and a relaxation of the muscles; in this state a slight twist and fall on the trochanter were sufficient to displace the feebly supported head.

*Prognosis.*—Very doubtful if the dislocation could be reduced now without greatly aggravating the local disease; and if so, the danger was, that spontaneous luxation would very soon occur; also, the difficulty of reducing it would increase with its duration; therefore, the prognosis was, probably, permanent lameness.

*Treatment.*—To allay all recent irritation, and reduce, as far as practicable, the original disease, and wait as long as we prudently could before attempting its reduction. Cups were directed, every other day, about the groin and trochanter; lead-water, stramonium-leaf, and poultices; purge with calomel and jalap occasionally, and salts daily; to be allowed no meat, and kept at perfect rest.

*Oct. 5th* (one month since the occurrence of the luxation). Limb felt less painful. Concluded to make *very gentle* efforts at reduction, to ascertain how she would bear the irritation, in order to enable us to judge as to the propriety of waiting longer. The patient lying on her back, the right thigh was very slowly and steadily approximated to the opposite one (adducted). It was then slowly (but firmly) flexed on the pelvis, to an angle of about 35°, when it was carried rather across the opposite knee, and an attempt made to rotate the foot inwards. An assistant was directed to hold the limb in this position, and make steady, gentle extension with his hands from the knee. With the flat part of my hand, I pressed pretty firmly, downwards and backwards, on the internal and most elevated part of the groin, (supposed to be the head of the femur,) for two or three minutes. A slight yielding movement of the lump was perceptible to my hand, and I immediately desisted, as these efforts were attended with considerable pain. The thigh was then slowly extended, (keeping up the slight extension,) and placed on the bed. There were less abduction and eversion of the foot, the prominence of the groin was slightly diminished, and there was some relaxation of the tension of the soft parts about the hip. No change (on a slight inspection) appeared in the length or in the position of the trochanter. Conclusion: head removed to the lower part of the foramen ovale. Means were now taken to allay any irritation that might have been produced in the previous disease of the socket, and to enable us to judge, from the effects of this gentle effort at reduction, of the propriety of, and time suitable for, making a further and more energetic attempt. The pain from our efforts, gentle as they were, was pretty severe, and lasted for twenty-four hours. It then ceased, the patient feeling better; the groin is less swollen, and she can make slight efforts to adduct the limb. She was retained in a state of perfect rest; the knees tied in contact, and a thick compress placed high up between the thighs, from a belief that the head of the bone was now on the edge of the socket, and with the view of gradually forcing it in.

*Oct. 9th.*—There is evidently less abduction of the limb; the patient can slightly adduct the right knee over the left; more freedom of flexion, and motions generally more free. Treatment continued.

*15th.*—Much improved; trochanter more prominent.

*17th.*—Upper third of thigh less flat; trochanter more prominent; the plane of the femur is farther back; groin more natural in appearance; elongation only $+\frac{1}{2}$ an inch; freedom of motion much greater; general health improved. Treatment continued.

*22d.*—General appearance of the patient much improved; her eye is bright; face fuller; appetite, sleep, pulse, tongue, and skin good; the thigh near the

groin somewhat flattened, but this is gradually disappearing; trochanter still less projecting than natural; elongation one-fourth or one-third of an inch; can place her leg over left knee; rotation of the leg internally gives some uneasiness, but the motions are pretty free; external rotation free; can flex thigh, though somewhat stiff.

24*th.*—Improving; strict rest of body and mind; cupping is omitted, and purging less frequent. ℞.—Mild iodine ointment to groin; increased diet; solut. iod. ferri, internally.

*November*, about the 20th.—Purging omitted; the patient sits up in bed occasionally.

*December* 20*th.*—Has been steadily and slowly improving, and now is permitted to walk about her room, very cautiously; she is a very little lame. Ointment and iod. ferri continued; diet improved. General health, sleep, and appetite very good; no uneasiness; appearance of limb perfectly natural.

1845, *January* 7*th.*—Medicines and ointment omitted. No pain or tenderness.

*February* 20*th.*—Walks up and down stairs, and everywhere; not the least lameness; no elongation; no pain nor tenderness; perfectly well.

*March* 28*th.*—Remains well, nearly six months after reduction.

Dr. Pepper read an account of a case of fatal peritonitis resulting from perforation of the appendicula vermiformis. On post-mortem examination, the appendix was found to contain, at its perforated extremity, a small mass of indurated fæcal matter, in one end of which was imbedded a large grape-seed; its mucous membrane was black, and in a gangrenous condition—whilst the other coats were softened and greatly thickened. The ileum, as also the caput-coli, were apparently perfectly healthy. Dr. P. thinks it highly probable that the grape-seed was the exciting cause of the inflammation, which ultimately led to ulceration and fatal perforation of the appendix.

The following two cases of hæmoptysis, in infants of three months old, communicated by Dr. Morris, are extremely interesting:

The first case was a male, one of twins, of a large size, and fine health up to the time of its attack. The mother, a woman of unusual intelligence and energy, reported the child to be labouring under an attack of colic, with diarrhœa of some days' standing. The discharges were frequent, green, and slimy. There were much heat of skin and thirst. The abdomen was flaccid, and the face anxious. The child cried much, and the sound was plaintive. The usual prescriptions in such cases were made: warm poultices to the bowels: small doses of calomel and castor-oil. By these means, the condition of the child was improved, though the heat of skin and febrile disturbance still continued. About the third day of my attendance, the mother showed me her collar, which was smeared with blood, that, she assured me, had been discharged from the mouth of her infant. I at once ascribed it to some ulceration of her nipple, for which I searched carefully, but without being able to detect the slightest solution of continuity. The gums and throat of the child were next examined, and an ulcer was found near the isthmus faucium, to which, though small, the issue of blood was supposed to be owing. The following day she exhibited a handkerchief much stained with blood, of a pink hue, which had been discharged again by the child. Dr. Meigs was now requested to see the infant, and his suspicions were so strong that the blood was derived from the breast of the mother, and vomited by the child, that he could not be persuaded to the contrary till he had examined the nipple with a magnifier, and applied smart friction with a cambric handkerchief. The respiration of the child did not deviate from the natural state sufficiently to attract our attention, though we visited it often, and examined it anxiously; nor was there, at any time, the slightest cough. After lingering a few days—the diarrhœa varying in degree—it sank into coma, followed by convulsions and death. The autopsic examination, made by Dr. Sargent, resident physician to the Pennsylvania Hospital, was as follows:

Exterior aspect of body pale; hands and feet of a bluish hue; similar colour of all the dependent parts of the body and limbs; very slight, if any, emaciation. The mouth and nose contained a frothy, reddish-white fluid, which escaped freely from these cavities when placed in a dependent position.

Brain not examined—nor posterior part of mouth and fauces. Larynx perfectly healthy.

The mucous membrane of the trachea and of the bronchial tubes, as far as their fourth or fifth ramifications, was reddened, and, in the bronchial tubes, slightly thickened, but in both entirely free from false membrane, or viscid secretion of any kind. The inferior portion of both lungs soft and crepitant, but containing abundance of a colourless serous fluid.

The lower lobe of the left lung was of a vivid red colour; contained a very small quantity of air, and but little serum; consistence of its tissue not materially diminished. The right lung was of the same bright red colour in its middle and lower lobes; the consistence of both these lobes was diminished, particularly of the middle; and the greater portion of this lobe sank when placed in water of medium temperature. There was no appearance of pus, nor of lobular discoloration or induration. No adhesion between the opposed pleural surfaces of either side; nor any effusion of lymph or serum in either pleural cavity. Both lungs were expanded. No tubercles in the lungs, or in the bronchial tubes.

The heart was of a healthy appearance; foramen ovale open.

The abdominal viscera were all carefully examined, but no lesion of any kind could be detected.

Within a week after, the surviving child was taken with symptoms precisely similar. Guided by the light derived from the examination of the preceding case, attention was now turned to the chest. With great difficulty, owing to the extreme restlessness of the infant, we were enabled to detect dullness, upon percussion, of the posterior part of the lower lobe of the right lung, with slight mucous rattle. The quantity of blood discharged, though less than that in the preceding case, was considerable; and in this instance Dr. M. saw it in the mouth of the child, frothy, and mixed with mucus. Small cups were applied to the back of the child, and two ounces of blood taken. Calomel, in minute doses, was given to act upon the diseased secretions of the liver; and, in a day or two, our patient was convalescent.

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Art. XVIII.—*A Synopsis of the Symptoms, Diagnosis, and Treatment of the more common and important Diseases of the Skin:* with sixty coloured figures. By N. Worcester, M. D., Professor of Physical Diagnosis, and General Pathology in the Medical School of Cleveland, &c. 8vo. pp. 292. Philadelphia, Boston, and Cincinnati, 1845.

It is surprising how little attention has heretofore been paid by American physicians to the study of the diseases of the skin, and how few among them are acquainted with their pathology, their diagnostic characters, and their proper treatment. Whether this has arisen from the less frequent occurrence of cutaneous affections in this country than in many portions of Europe, or from the obscurity with which they have been enveloped by the difference in the nomenclature and classification adopted by the several authors who have written professedly upon them, it is difficult to determine; perhaps both these causes have tended to produce that indifference with which almost every thing in relation to these diseases has been treated by the medical profession in the United States.

When we consider the variety and importance of the cutaneous diseases—their generally disgusting appearance—the very troublesome and often distressing symptoms by which they are attended, and the tendency in many of them, when neglected or mismanaged in their earlier stages, to produce changes in the organization of the skin and subcutaneous tissues, which render their removal extremely difficult, or even impossible, by any plan of treatment, we cannot but regret the small amount of attention that has been directed by our physicians to their investigation.

"They can scarcely be said," as Dr. Worcester correctly remarks, "to form a part of the professional education of students, in the annual courses of medical lectures of this country," while the want of success exhibited by the regular practitioners generally, in their management, has too often consigned the subjects of

them to the care of the designing empiric, to whom they afford a fruitful source of emolument.

The work before us is, we believe, the first American treatise that has been published upon the diseases of the skin; and we trust that before long it may be followed by others of a more strictly original character; in which the authors instead of repeating with servile accuracy the theories, classification, and therapeutical directions of the European dermatologists, shall present us with the results of their own observations and experience.

Dr. Worcester's only aim in the preparation of the present synopsis, has been to present to the profession "a concise and accurate treatise on the diseases of the skin"—"that can be afforded at such a price as to be within the reach of all"—and, "if he has succeeded in giving a correct description of the more common forms of these affections, illustrated by well executed plates, with the most appropriate treatment" for each, his object, he assures us, has been accomplished; utility and not originality having been his design.

We are persuaded that the work will be found a convenient manual for the use of such as desire to enter upon the study of "the symptoms, diagnosis and treatment of the more common and important diseases of the skin." The author appears to have consulted with considerable care the best and most authoritative writers on the subjects of which he treats; and from the materials thus collected has formed a valuable synopsis—which, though too concise to satisfy those who desire to make themselves perfect masters of dermatology, is sufficiently minute as an introduction to its study.

The figures are copied from Willan, Bateman, Thompson, Rayer, Alibert, Wilson, Erichsen, Cazenave and Ricord; their execution, however, cannot be very highly praised, and though they may afford some idea of the affections they are intended to represent, it will be, we must confess, at best but a very imperfect one.

Dr. Worcester has followed the classification of Willan, so far, at least, as relates to the arranging into orders of the different cutaneous affections, and the system upon which this arrangement is based; he has, however, for the purpose of facilitating diagnosis, divided the several orders of Willan into *two groups* or *divisions*, the dry, and the moist. The first group includes the vesiculæ, bullæ, and pustulæ, the second, the exanthemata, papulæ, squamæ, tuberculæ, and maculæ. This, if the classification of Willan is adopted, constitutes a very useful modification of it; but, we believe, that a classification somewhat similar to that adopted in the elaborate work of Wilson, in which it is attempted to arrange the diseases of the skin according to their physiological and anatomical characters, will be found the most simple and easy of application, and the one best adapted to lead to a correct knowledge of the character of these diseases, their prevention, and cure.

In the arrangement alluded to, "the dermis and its appendages, its glands and follicles, are considered to be the seat of all the changes which characterize cutaneous pathology;" consequently, cutaneous affections are divided by him in four groups or divisions, namely: those of the dermis, those of the sudariparous glands, those of the sebaceous glands, and those of the hair and hair follicles.

The synopsis before us does not embrace the eruptive fevers—from the fact, as the author remarks, "that the eruption in these affections is only a symptom of the general disease, that a minute account of them is contained in most of the treatises on the theory and practice of medicine, and that the principles of diagnosis are comparatively well understood."

We can with great confidence recommend the work of Dr. Worcester to the notice of our readers—who, while they cannot fail to receive instruction from its pages, will feel an additional pleasure in consulting it from the very beautiful manner in which it is printed. It speaks well for the taste and mechanical skill of the printers of Cincinnati.

D. F. C.

ART XIX.—1. *Sixth Annual Report of the Directors and Superintendent of the Ohio Lunatic Asylum, to the forty-third General Assembly,* Dec. 9, 1844. Columbus, 1844, pp. 67.

2. *Annual Report for* 1844, *of the Managers of the Lunatic Asylum (at Lexington, Ky.,)* pp. 38.

3. *Seventeenth Annual Report of the President and Directors of the Western Lunatic Asylum, to the Legislature of Virginia; with the Report of the Superintendent and Physician, for* 1844, pp. 45.

4. *The second Annual Report of the Physician of Mount Hope Hospital, (late Mount St. Vincents) Baltimore, for* 1844, pp. 27.

1. Dr. AWL's report for the past year, like those which have preceded it, affords evidence of the great philanthropy of its author, as well as of his professional skill and judgment.

| | Males. | Females. | Total. |
|---|---|---|---|
| Patients in the Ohio State Asylum Nov. 15th, 1843 | 77 | 71 | 148 |
| Admitted during the year - - - | 39 | 29 | 68 |
| Whole number during the year - - | 116 | 100 | 216 |
| Discharged and died - - - | 37 | 33 | 70 |
| Remaining, November 15th, 1844 - - | 79 | 67 | 146 |
| Of those discharged, there were cured - | | | 40 |
| Died - - - - - | | | 7 |
| Whole number of admissions (6 years) - | 287 | 254 | 541 |
| " " discharged, cured - - | 138 | 105 | 243 |
| " " died, - - - - | 34 | 23 | 57 |
| " " single - - - | | | 266 |
| " " married - - - | | | 288 |
| " " widowed - - - | 12 | 35 | 47 |

*Ages at which Insanity commenced.*—Under 20 years, 56; from 20 to 30 years, 240; 30 to 40 years, 130; 40 to 50 years, 76; 50 to 60 years, 32; 60 to 70 years, 7.

*Causes of Death.*—Inflammation of liver, 1; dropsy, 2; inflammation of brain, 3; fever, 3; apoplexy, 1; palsy, 3; consumption, 6; epilepsy, 7; marasmus, 6; diarrhœa, 9; dysentery, 11; inanition, 5.—Total, 57.

In allusion to the deaths by epilepsy during the past year, Dr. A. writes as follows:

"The months of December, January and February, were particularly severe upon our epileptic patients. Their convulsive paroxysms were increased in number and severity, followed by an extraordinary sinking and prostration of the vital powers, occasioning death in the three instances mentioned, and an unusual amount of suffering and weakness of the body and mind, for many days, in all who survived. We observed something of the same kind of suffering with this class of patients, about two years since, when, as upon the last occasion, it appeared to assume the form of a special endemic amongst the epileptics. All others continued to enjoy their ordinary health. It was characterized by very frequent returns of the epileptic spasms, with a strong tendency to apoplexy. The pulse was remarkably small, weak, and fluttering; features dull, unmeaning and sunken; mind lost, or imbecile, attended with great exhaustion of physical strength. On both occasions, it was wonderful to observe how the most robust were enfeebled and fallen, and how long time it required for them to regain their former strength and condition of mind and body. A hired girl in the institution, subject to occasional epilepsy, was also observed to suffer from the same train of symptoms. With the last appearance of this peculiar endemic, the weather was unusually mild and open for the season, and the country extensively inundated from continued rains; the thermometer being greatly elevated and the barometer depressed, for a long period of time."

The report contains an interesting account of the observance of the 4th of July

at the Asylum, and of the ceremony of laying the corner-stone of the "West Verandah," an additional edifice now in progress.

2. It is a subject of congratulation for all who are either directly or indirectly concerned, that the Kentucky State Asylum has at length attracted the attention and secured the interest of persons who were disposed to raise, and who now are raising it from the wretched condition in which—if the accounts given of it be correct—it has until recently been suffered to exist. Dr. John R. Allen, to whose qualifications for the situation the managers of the asylum bear satisfactory testimony, has received the appointment of superintendent, and his efforts appear to be directed to a general reformation of the establishment, with the view of placing it upon a par with the other institutions of the kind in this country. The several means of moral treatment have already been introduced, and other meliorations of the condition of the patients effected.

The detailed statistics of the report embrace a period of but ten months, from March to December, inclusive, 1844.

| | Males. | Females. | Total. |
|---|---|---|---|
| Patients in the Asylum, March 1st, 1844 - | 92 | 71 | 163 |
| " admitted from March 1st to Dec. 31st | 46 | 27 | 73 |
| Whole number during that period - - | 138 | 98 | 236 |
| Discharged and died " " - - | 36 | 17 | 53 |
| Remaining, December 31st, 1844 - - | 102 | 81 | 183 |
| Of those discharged, there were cured - | 22 | 12 | 34 |
| Died - - - - - - | 5 | 3 | 8 |
| Of the whole number, there were single - | 99 | 40 | 139 |
| " " " " married - | 30 | 36 | 66 |
| " " " " widowed - | 7 | 24 | 31 |
| The number of patients admitted from the time of opening the Asylum, in May, 1824, to the 31st of December, 1844, was - - - | | | 1128 |
| Discharged and eloped during the same period - - - | | | 515 |
| Died - - - - - - - - - | | | 416 |

In reference to the discharges, &c., (515) Dr. Allen says:—"From this number, deduct 93 elopements and 25 removals, and we have the number of recoveries, 404. We have, in this estimate, *taken it for granted that for some years after the opening of the books of the Asylum, all recovered who were discharged, or so marked.* This, perhaps, is not more than generally true, as we ascertained that some thus marked had been removed, &c. The elopements have amounted to about one in twelve, a very large proportion. For some years back, however, this has been greatly reduced. Some years none have eloped. In the last four years, about one in twenty-eight; during this year, one in fifty-seven."

Of the deaths, it is remarked:—"This great mortality seems to have attended this establishment up to the present year; and during this year not a very small portion have died. For three (four?) years past, 1840, 1841, 1842 and 1843, including January and February, 1844, there have occurred 105 deaths, about 1 in 4. During the present year (since 1st March last) we have had 8 deaths out of 236 patients, about 1 in 29½."

The subject is again recurred to in the report, with the following explanatory remarks:—

"The immense fatality may be accounted for on reasonable grounds. Our house, pronounced by one well qualified to judge, 'at best but a comfortable prison,' and which interferes with every thing else, is again at fault here. It cannot be ventilated or warmed well; pure air and proper temperature cannot be always secured. The patients were, for a number of years, confined almost entirely to their rooms, and sufficient exercise was consequently not allowed. Their diet was also much neglected for a length of time. And then that dreadful epidemic, the cholera, invaded the Asylum during its prevalence in this country, destroying 30 or 40 patients * * *. But perhaps the greatest cause of such unusual mortality has been a want of sufficient medical attention. No physician, however skilful, can treat the incidental diseases of the insane, without an hourly and uninterrupted attention to them * * *. Medical men of the first distinction,

and practitioners of decided character, have generally been the attending physicians. Allowed but a trifling compensation for their services, they could not be expected to pay more than an occasional, or, at most, a daily call to the Asylum. With the closest and best directed attention to the incidental disorders of the deranged, success cannot be so great as among other sick; and with deficient care, mortality must necessarily be increased in a greater ratio."

With each successive year the interest manifested in mental diseases, and in those who are afflicted with them, appears to increase and extend, among physicians, philanthropists, legislators and the community in general. Facilities for their accommodation at institutions in which they may be subject to the most successful mode of curative treatment, keep pace with this progressive interest. At the present time, large additions are being made to the Massachusetts, New York and Ohio State Asylums, and an enlargement of that of Kentucky is recommended by Dr. Allen. In Rhode Island a farm has been purchased and the buildings of an asylum are about to be erected, and the legislatures of New Jersey and Indiana have authorized the establishment of similar institutions in those states.

| | Males. | Females. | Total. |
|---|---|---|---|
| 3. From Dr. Stribling's report, we learn that the whole number of patients in the Asylum at Stanton during the past year, was - - | 130 | 55 | 185 |
| Of these, there were in the asylum Jan. 1st, 1844 | 81 | 38 | 119 |
| " " admitted during the year | 49 | 17 | 66 |
| Discharged, eloped, and died - - | 34 | 8 | 42 |
| Remaining December 31st, 1844 - - | 96 | 47 | 143 |
| Of the 42 who left the asylum, there were cured | 21 | 6 | 27 |
| " " " " died - | 3 | 2 | 5 |
| Of the whole number, there were married - | 22 | 15 | 37 |
| " " " " single - | 94 | 32 | 126 |
| " " " " widowed - | 9 | 8 | 17 |
| " " " " unknown - | 5 | 0 | 5 |
| Whole number of patients admitted from July 1st, 1836, to Dec. 31st, 1844 - - | 227 | 97 | 324 |
| " " " discharged " | 145 | 60 | 205 |
| " " " cured " | 84 | 39 | 123 |

The proportion of cures is greater in the females than in the males.

Dr. Stribling thus gives his views in regard to the utility of medical treatment.

"Whilst we are free to admit that no institution for the insane can be conducted with success in which a judicious, humane and extensive course of moral management is not deemed indispensable to the best interests of the great majority of its inmates, we are equally satisfied, that in most cases in which the duration of the malady has not been such as to preclude all hope of recovery from the use of such means, medicine, in some of its forms, affords a most valuable auxiliary in their treatment; and in many cases it not only proves necessary, in order to render the patient susceptible to moral influences, but so far as we have been capable of tracing effect to cause, we are satisfied it has often merited the entire credit of the cure."

Of the moral treatment he writes as follows:—

"The high estimate which we attach to the moral department might be inferred from the preceding remarks, even had we not expressed, as we have done, so fully, our views in regard thereto in former reports. We need only add here, that the great principles of classification, labour, exercise, amusements, occupation, diet, and last, though not least, religious instruction, are never permitted for a moment to be lost sight of, in the management of this institution,—and every means are afforded, every inducement held out to the patients to avail themselves of the inestimable advantages to be derived therefrom."

By the completion of three additional buildings, apartments for eighty patients have been made during the past year. The asylum can now accommodate two hundred and twenty. Dr. S. suggests the necessity of an institution for the coloured insane of Virginia, and intimates a willingness to take the charge of it provided the

legislature should see fit, from a motive of economy, to connect it with, or make it a department of the Stanton Asylum.

A large portion of the report is occupied by the "system of regulations" for the asylum.

4. This well-written document, from the pen of Dr. Stokes, is the first we have received from the institution under his medical care.

The Mount Hope Hospital is not exclusively devoted to the reception and treatment of the insane, but has a department for "general diseases."

| | Males. | Females. | Total. |
|---|---|---|---|
| Insane patients at the beginning of the year 1844 | 13 | 22 | 35 |
| Admitted during the year - - - | 41 | 22 | 63 |
| Whole number - - - - | 54 | 44 | 98 |
| Discharged and died - - - - | 30 | 21 | 51 |
| Remaining Dec. 31st, 1844 - - - | 24 | 23 | 47 |
| Of the cases discharged, there were cured - | 28 | 11 | 39 |
| Died { mania-à-potu - - - - | 3 | 1 | 6 |
| Died { insanity - - - - | 1 | 1 | 6 |

Of the sixty-three patients admitted during the year, no less than *twenty-three* were labouring under mania-à-potu. Four of these died and four remained at the end of the year, leaving 19, all of whom, we infer from the nature of the disease, although nothing is said upon the subject in the report, were cured. Hence the greater proportion of cures than in asylums where cases of mania-à-potu are never, or but rarely received.

The following extracts give a lucid exposition of the principles by which the medical and moral treatment is governed at this institution.

"Practitioners may rest assured, that the more they are guided in their treatment by the general principle, that each case should constitute, in itself, a distinct subject of study and consideration, and that the means of cure should be appropriate to its peculiarities at the time of prescribing for it, a greater degree of certainty and success will attend their efforts. We should endeavour to ascertain by a careful analysis of the symptoms, the exact pathological or physical conditions existing in the particular case, and direct our remedies as accurately as possible, with a view to the removal of that morbid condition."

"We hold it to be a measure of primary importance in their moral management, to endeavour to obtain and preserve the confidence of each patient. This confidence may be viewed as the very keystone of all moral treatment; and as conducive to its attainment, it is necessary that our daily intercourse with them should be characterized by an untiring sympathy, and by constant patience and kindness. We hold it still further to be our bounden duty, in order to secure them cheerfulness and content by day, and comfortable rest by night, to resort to every innocent means calculated to amuse and occupy them. Thus, by the avoidance of every thing likely to irritate and excite, and by the encouragement of every effort at self-control and self-government—omitting no opportunity to increase their self-respect, we seek gradually to restore the delicate balance of the mind. In a word, we endeavour to keep always in view 'the precept and the maxim' of M. Pariset. The *precept* is, to favour the renovation of the organization by attending to the excretions and to nourishment. The *maxim* is to establish with the patient the only authority to which they yield; an authority founded on confidence and respect, and only to be obtained by justice and goodness.

"It will thus be perceived, that the general principle pervading our whole system of moral management of the insane, is to treat them as far as practicable as if they were sane.

"As Sir Henry Halford advises, 'we act as it were upon a system of education, and aim thereby at confirming the spirits, and strengthening the mind of the convalescent; and as the discipline employed in youth encourages and enforces the predominance of reason over the passions, so does discreet converse assist in restoring reason to her seat, and in giving her back again her proper sway over wild impulses. Thus we engage the mind agreeably by presenting to it new ob-

jects, and by recalling former pursuits to their wonted acceptance.' To effect our purposes we never resort to coercive measures. We never seek to crush and subdue the spirit of the violent by close confinement in a cell. We have nothing of the kind about the establishment, and have discarded the tranquilizing chair, the straight-jacket, &c., as wholly inapplicable in any case of mental derangement. 'Firmness and kindness; perfect firmness and kindness not to be averted from its objects by the perverseness of the patient, we find to be more powerful than threats and severity.'"

P. E.

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ART. XX.—*Mental Maladies. A Treatise on Insanity.* By E. ESQUIROL, Physician in Chief of the Maison Royale des Aliénés de Charenton, formerly Inspector-General of the University, &c. Translated from the French, with additions, by E. K. HUNT, M. D. Philadelphia: Lea & Blanchard, 1845: pp. 496.

THE treatise of Esquirol on mental diseases has, for a long period, been almost universally regarded as one of the very best and most comprehensive that has anywhere appeared on the important division of medical science, to which its author devoted, with remarkable success, the greater portion of a long and useful life.

The original work is to be found in the library of every one who professes to be familiar with insanity; and the sentiments of Esquirol are everywhere quoted as authority on this subject. For a long period the medical director at the immense Hospital of Salpétrière,—of that at Charenton, and with opportunities for observation in private practice, perhaps never equaled by any other individual; with a mind admirably constituted, and with systematic habits and great accuracy of observation, he seemed peculiarly qualified to do infinite service to the community, by the publication of the results of his practical reflections. From such a man, a work could hardly fail to take a permanently high standing, when its author could say as Esquirol does in the preface to his great "treatise," "It is the result of forty years' study and observation. I have noticed the symptoms of insanity, and have studied the manners, habits and wants of the insane, in the midst of whom I have passed my life. I have also tried the best modes of treatment. Confining myself to facts, I have arranged them according to their relations. I have stated them as they have been observed, without, in general, attempting to explain them; and have avoided systems, which always appeared to me more seductive by their splendour, than useful in their application."

The work before us is a translation of all that portion of Esquirol's treatise "relating properly to insanity; the remainder, referring, for the most part, to the statistics and hygiène of establishments for the insane, together with the medico-legal relations of the subject, has been omitted," as being likely to add disproportionately to the size and cost of the volume.

It will hardly be necessary in referring to a work so well known in the original, to enter upon any minute analysis of its contents or of the principles advocated by its author; we shall do little more than state the different subjects which are fully and ably treated of in the volume before us, and notice some few of the additions made by the translator.

After a full description of insanity, its different divisions—its causes—and treatment, separate chapters are devoted to the subjects of hallucination, illusions of the insane, puerperal insanity, epilepsy, critical termination of insanity, lypemania or melancholy, demonomania, suicide, monomania, mania, dementia and idiocy. All these important subjects are ably treated, and a great variety of cases detailed in a manner that cannot fail to interest the professional reader. A great amount of pathological information is also very lucidly given in the minute autopsies which are recorded in fatal cases.

Of the numerous notes by the translator, scattered throughout the volume, the most valuable are those which relate to the treatment of insanity, as practised in this country, and which differs mainly from that recommended by our author, in the much more liberal use of tonics and narcotics, especially the latter, than was common anywhere when Esquirol published his treatise. Some diversity of

sentiment still exists among the medical officers of American institutions for the insane, as to the precise extent to which opiates should be carried, but by nearly all, we believe, they are regarded of importance, and by some, for a very considerable class of patients, as more valuable than all other medical remedies together. Much discrimination is unquestionably required in the selection of the cases in which they are desirable, and afterwards administering them in full doses for a sufficiently long period.

We agree with Dr. Hunt, that the rarity of post-mortem examinations in this country in fatal cases of insanity is a matter for great regret, and trust that gentlemen having hospitals for the insane under their care, will lose no suitable opportunity for these investigations, which must ultimately lead to important practical results.

Dr. H. has also added notes that will be read with interest, on the treatment of some of the varieties of insanity; on epilepsy; on the means of preventing suicide; and a history of the delusion of "Millerism," which, of late years, particularly in the northern sections of this country, has been a most fertile cause of insanity.

From a cursory examination, the translator appears to have executed his laborious task with fidelity; and to him and the liberal publishers the profession must feel under obligations for having placed within the reach of all, an English version of a standard work upon a most important, but heretofore too much neglected subject; a volume filled with sound principles and carefully observed facts, one which should be upon the shelves of every physician, and which can be read with pleasure and hardly be consulted without profit.

T. S. K.

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ART. XXI.—*Twenty-fourth Annual Report of the Bloomingdale Asylum for the Insane.* By PLINY EARLE, M. D., Physician to the Institution. New York, 1845: pp. 55.

THE Bloomingdale Asylum is a branch of the New York Hospital, located about six miles from the city of New York, and, from the interesting report before us, is in a highly flourishing condition. During the year 1844, 57 males and 49 females, a total of 106 patients, have been admitted into the institution, making the whole number under treatment during that period 206, of whom 110 were males and 96 females. During the same period, 102 patients were discharged or died, and of these, 50 are reported as *recovered*, 27 *improved*, 12 *by request*, (condition not stated,) and 13 died. Among the admissions, were several cases of *delirium tremens*, a disease which Dr. Earle very properly remarks "ought not to be classified with ordinary mental alienation," and which we have always thought ought not to be treated in the same establishment.

Of the 206 cases under care, 127 were mania, 35 melancholia, 39 dementia, 3 idiocy, and 2 moral insanity.

Of the supposed causes, those supposed to be *physical* amount to 113, while the *moral* are only 46, 47 of the whole number being registered as *unknown*.

Of the same number 107 were single, 78 married, and 21 widowed.

From the tenor of Dr. E.'s remarks, the premature removal of patients is a serious evil at Bloomingdale as well as at the generality of institutions, where the friends of patients pay their board, and where no authority exists to detain an individual longer than comports with the theoretical notions or is consonant with the feelings of friends who have little knowledge of the true nature of insanity or of the means required for its relief. We know of no way in which our professional brethren could do a greater service to the community than by impressing upon its members. that insanity is chronic in its character, and that a long course of treatment—protracted even to a year or more, may be requisite for the restoration of some, whose minds are afterwards perfectly sound during a long life.

On the subject of suicide Dr. E.'s remarks are sound and judicious. This class of patients gives more anxiety to the medical officers of insane hospitals than all others put together, and with all the precautions that can be taken accidents will occasionally occur.

Dr. E. repudiates the idea of placing such patients generally under corporeal restraint and for the very good reason, if there were not other weighty ones to be urged against the measure, that in many cases it would be quite ineffectual. In reference to the *medical treatment* of insanity, we entirely concur with Dr. Earle, "that the report of a public institution, intended as it is, for general readers, for persons mostly unconnected with the medical profession, is not a legitimate or appropriate organ through which to publish a detailed account of the subjects belonging to this department." We have never been able to understand, why the details of *medical* treatment in *insanity*—the different formulæ employed, or dissertations on these subjects should be discussed in documents unquestionably more *popular* in their general character than the same matters when applied to fevers, to phthisis, or any other maladies. Such information is, or ought to be intended for the profession, and with great deference for the opinions of some who differ from us on this point, the medical journals of the country are the media through which it should be obtained.

During the past winter a course of lectures upon miscellaneous subjects has been given for the advantage of the patients and with very satisfactory results. We have no doubt that for hospitals of a particular description, lectures will be found the best and most popular mode of instruction for insane patients.

On the subject of restraint, Dr. E. believes with most American superintendents, that mechanical means are rarely required, but that "there are cases when the application of them is the most judicious course that can be pursued." We are gratified to learn that "the so called 'tranquilizing chairs,' which had for many years been among the means of restraint, were taken from the halls in April last, and neither of them has since been used."

Why this chair was called *tranquilizing*, we cannot imagine, for such an effect we never saw produced by it; in excessively rare cases it might be used with advantage, but it is so liable to abuse and to be used unnecessarily, that we feel confident it is better to banish it from all institutions for the insane. Of the means of restraint, Dr. E. regards "the *camisole*, the only distinguishing peculiarity of which is, that the sleeves are about twice the length of those of ordinary garments," "among the most simple, effectual, and least offensive to the patient.

An interesting historical notice of the provisions made for the insane by the corporation of the New York Hospital, follows, and the report concludes with tables of the produce of the farm and garden, meteorological observations and the form of register adopted at the asylum. T. S. K.

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ART. XXII.—*Dissertatio Obstetrica Inauguralis de Prolapsu Funiculi Umbilicalis. Auctore.*—JOH. CHRIST. SAXTORPH. Medicus subsidiarus Nosocomii Frederiçiani. Hauniæ, MDCCCXL.

*An Inaugural Dissertation on Prolapsus of the Umbilical Cord.*—By JOHN C. SAXTORPH, Subordinate Physician of the Frederick's Hospital. Copenhagen, 1840: 8vo., pp. 68.

FROM the statistics collected by the author of the present dissertation, who appears to have collated, with great industry, almost every thing that has been written upon the subject of prolapsus of the cord by the ancient and modern obstetrical authors,—compared with those given by Churchill, we find that the frequency with which this accident occurs, is rather less than four times in every thousand cases of labour. In two hundred and ninety-two cases, the prolapsus occurred in head presentations; in forty-two, in presentations of the head and extremities; in five, in presentation of the nates; in twenty, in presentations of the feet, and in twelve, of the arm or shoulder.

In 356 cases of labour complicated with prolapsus of the cord, collected by our author, the infants in 195 were born dead, and, in 355 cases given by Churchill, 220 of the children were lost. From the two sources we obtain the statistics of 463 cases of prolapse of the cord, in which 380 of the infants were born dead, being about 82 in the hundred, a larger mortality, as Churchill remarks, than we find in any other order of practicable labour.

From these facts, we can understand the great anxiety which many of the European obstetricians have evinced to discover some effectual means either to prevent the prolapse of the cord at the commencement of labour, or to replace and retain it beyond the head of the child when its descent into the pelvis has unfortunately occurred.

The whole subject is very ably discussed by Dr. Saxtorph—who has collected and compared the opinions of all the leading authorities in relation to it, and described all the various procedures that have been suggested to save the life of the infant when prolapsus of the cord takes place.

His dissertation constitutes certainly one of the most complete digests of all that is known, or that has been imagined in reference to this accident, its causes, its prevention, and its remedies, that we are acquainted with. But, although it contains numerous references to authorities with whose names even we are but little familiar, and presents the results of the experience of the entire host of obstetrical practitioners of nearly all ages and all countries, it affords, after all, scarcely a single useful rule to direct us in the management of the cases of labour of which it treats, beyond what are to be found in any of the recent works on midwifery.

Of the various instruments that have been proposed with the view of carrying up the prolapsed cord, and retaining it beyond the head of the fœtus until this has so far descended into the pelvis as to prevent it from again falling down—of which accurate delineations are given by our author—although some are better adapted, no doubt, for the purpose than others, no one will be found invariably to succeed; few of them can be used, indeed, without incurring some risk to the soft parts of the mother whatever degree of caution may be employed.

The instruments described and delineated in the work before us, are those of Aitken (*Elements of Obstetrics*); Eckardt (see *Busscher, de funiculi umbilicalis prolapsu, Journ. Gén de Méd.*, t. x.); Ameline (*Journ. Gén. de Méd.*); Ducamp (see *Busscher*); Dudan (see *Dewees—Velpeau*); Champion (*Schure, de la procidence du cordon ombilical.*); Michaelis (*abhandlungen aus dem Gebiete der Geburtshülfe*); Bouhard (*Neue zeitschrift für Geburtskunde*, bd. 2); Schöller (*Ibid.*, bd. 6); Davis (*Operative Midwifery*); Trefurt (*Neue Zeitschrift für Geburtskunde*, bd. 2); Tellengen (see *Busscher*); Bakker (*Journ. Gén. de Méd.*, t. x.). D. F. C.

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Art. XXIII.—*Practical Remarks on some exhausting Diseases, particularly those incident to Women.*—By Sir James Eyre, M. D., Physician at St. George's and St. James's Dispensary. London: John Churchill, 1845: 12mo., pp. 75.

The object of this essay is to induce practitioners to make trial of the oxide of silver in pyrosis, certain cases of gastric disorder, the slowly exhausting hemorrhage from mucous surfaces, and above all, atonic menorrhagia, which diseases, the author confidently predicts, will henceforth, by the use of the remedy just alluded to, be as amenable to treatment as it has hitherto been unmanageable.

Attention was first drawn to this remedy by Dr. C. B. Lane,* who reported very favourably of its effects in gastrodynia, pyrosis, menorrhagia, hemorrhage from the bowels, diarrhœa and irritable bladder, and its effects are said to have been speedy, and produced without a single bad symptom.

Dr. Lane also says that Dr. Golding Bird has tried it in one hundred cases, and "thinks well of it in menorrhagia, considering its properties to be tonic, and to a certain degree sedative, and that Drs. Clendinning and Ryan thought it useful in epileptic and gastralgic affections. The result of Dr. Eyre's experience is fully confirmatory of the high character here given of the oxide. He has administered it in a large number of cases, the records of most of which have been kept, and many of which are reported in the present work.

That the oxide is a tonic and a sedative Dr. Eyre thinks there can be no doubt, and that there is good evidence to prove that it is a safe and efficient astringent. He never gives it in doses exceeding three grains a day, and its employment is

* See Nos. of this Journal for Jan., 1842, p. 204, and April, 1842, p. 464.

not recommended where febrile action exists in any considerable degree. "In addition," says Dr. E., "to its value in gastrodynia, in pyrosis, in hæmatemesis, and in the first and second classes of menorrhagia, of Dr. Fleetwood Churchill, it will be found to be productive of infinite benefit in restraining, when absolutely necessary, hemorrhage proceeding from the intestinal canal, obstinate chronic diarrhœa, colliquative perspirations, leucorrhœa and other maladies, in the treatment of which the writer is, at the present time, extensively testing its efficacy."

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ART. XXIV.—*The Principles of Surgery.* By JAMES MILLER, F. R. S. E., F. R. C. S. E., &c. Philadelphia, Lea & Blanchard, 1845: 8vo. pp. 525.

AT a time like the present, when the attention of practitioners and students is so much directed to operative medicine, we rejoice to see the appearance of a work upon the principles of surgery. Any thing which tends to divert from the study of surgery as an art, to that of surgery as a science, must diminish the love for bloody shows and operative displays now so prevalent, though it will not be overcome until our colleges cease to pander to the morbid appetite, and their teachers devote at least a portion of their time to the exposition of principles.

The design of Mr. Miller in this work is to present a condensed view of the principles of modern surgery. In its preparation it was his endeavour to combine soundness of doctrine with simplicity of arrangement, and plainness of illustration, and these objects he appears to have well accomplished. Being itself a condensed and elementary treatise, it needs no analysis. The work is divided into four sections.

The first treats of Elementary disease, embracing Congestion, Local and Constitutional Irritation, Atrophy, and Inflammation, with its various terminations.

In the second section, Perverted Vascular Action in certain tissues is considered. This embraces Periostitis and other affections of the Bones, the various diseases of the Joints, Diseases of the Arteries, Veins, Lymphatics and Nerves, and Hemorrhage.

The third section discusses the subject of Perverted Nutrition, and the fourth includes all the various Injuries to which our frame is liable.

Appended to the work of Mr. Miller is a good condensed view of the History of Surgery, written originally for the Encyclopædia Britannia. This is a useful addition to the book and will be read with interest. We regret, however, that in any historical sketch intended for the American student that the venerated name of Physick should find no place. With him the study of surgery may be said to have begun among us.

When his career commenced, no separate course on surgical diseases had ever been delivered in these United States,—the few lectures devoted to them being given in connection with those on anatomy. The practice of surgery at that time was such that the rich removed to Europe for advice, or for the purpose of undergoing even what might be called trivial operations, while the poorer classes, except when collected in some one of the then few hospitals of the country, where they fell under the care of men who had been educated abroad, were left to those incompetent to relieve them by operative means, or to ignorant pretenders..

Arriving fresh from the school of Hunter, the youth whom destiny selected to lead the way in the teaching of surgery on this continent, and to as successful and extensive an exercise of it as can ever again fall to the lot of any individual, brought with him the principles of that great master, and by dwelling on their value, extending their application, simplifying them, and successfully demonstrating their practical value, he caused them everywhere to be received and at once to change the face of surgery among us. By the happy adaptation of his methods of treatment, he effected brilliant cures. Established operations which had never before been undertaken here, he performed at the same time that he devised improved or new means for the cure of affections that were previously either rebellious to ordinary treatment, or had not before been attempted.

One of the great points in the character of Dr. Physick was his zealous endeavours to avoid the performance of all operations. He justly looked upon improve-

ments in medical surgery as infinitely more glorious than displays with the knife, and the reformation which he effected in the treatment of chronic inflammation by attention to diet—of diseased joints by means of carved splints and perfect rest—of ulcers by position—of pseudarthrosis by the treatment with the seton, and of fractures by the great simplification of apparatus, may be pointed to as improvements which have been the means of saving thousands from amputation, deformities and beggary.

Like Desault, Physick did less by his inventions and originality to recommend his name to posterity than by the great impulse which he gave to the study of surgery, and by improvements in apparatus and treatment. Like Desault, his teachings were strictly practical, and with both, their auditors were attracted less by eloquence than by the truthfulness of their lessons. Physick, as was the case with Desault, wrote nothing, though less fortunate than he, there were none, as with the latter, to spread before the world in the pages of a surgical journal an expose of his practice; and no devoted pupil, like Bichat, has yet been found to consecrate his memory by a work founded upon the principles taught by and illustrated with the great experience of his master. G. W. N.

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ART. XXV.—*Principles of Forensic Medicine.* By WM. A. GUY, M. B., Cantab., Prof. of Forensic Medicine, King's College, London, &c. &c. First American edition, with Notes and Additions, by CHARLES A. LEE, M. D., &c. &c. 8vo., pp. 771. Harper and Brothers, New York, 1845.

MR. GUY was induced to prepare this treatise, based upon his lectures on forensic medicine, as a class-book for his students—there being at the time no useful or convenient work to answer this purpose. He was also desirous of placing in the hands of practitioners a manual simplified in its details, furnished with more accurate standards of comparison than are to be found in previous treatises, and with a careful analysis of the statements of authors upon practical points. In his own language, "the plan adopted in treating the several subjects is to begin with a short statement of the existing provisions and requirements of the law, avoiding all unnecessary discussion as to the state of the law in former times and in different countries. The chief medical questions arising out of the law are then investigated under distinct heads; practical rules for medico-legal examination are appended, and the subjects are illustrated throughout by cases."

The space devoted to each subject has been determined not by the importance of the subject, but rather "by the length of the discussions necessary to render it intelligible," and the arrangement is the same as that adopted by the author in his lectures, to which it was made to conform in order to render the work more useful to the student in following him.

Mr. Guy opens with a chapter on medical evidence, exposing clearly and fully the circumstances under which a medical man may be called into court, the behaviour he should maintain there, and the testimony he may be called upon to offer. Personal identity, age, sex, are from their close connection in questions of the identification of individuals, considered together in the next chapter. Following these, the subjects of impotence, rape, pregnancy and delivery, all of them involving questions of the greatest moment, are dwelt upon at considerable length and with much ability. Fœticide, infanticide and legitimacy next claim attention; the account of them being prefaced by a careful essay upon the growth and development of the embryo. Under the head of fœticide, the author asks under what circumstances is it proper and justifiable for the physician to induce premature delivery, and thus answers: "The medical man is clearly justified in resorting to any measures which promise to preserve the life of mother and child when both are threatened; and where one only can by any possibility be preserved, the female herself may use her right of self-preservation and choose whether her own life or that of her child shall fall a sacrifice to the means recommended to be used."—p. 145.

The subject of infanticide is very carefully considered, and a very just appreciation of the various tests to establish the absence or occurrence of respiration, is

laid before the reader, showing how uncertain and therefore useless they very often are.

The second part of the work contains chapters on life assurance and feigned diseases, on the very important subject of unsoundness of mind, amentia, dementia and mania in all its forms and varieties,—to the examination of which the author has applied himself very carefully and at much length, as it involves questions of the highest interest to society and to individuals, and to which within a few years attention has been very closely directed,—on persons found dead,—the questions of real and apparent death, of sudden death and of survivorship being embraced in this chapter;—on death by drowning, hanging, strangulation and suffocation; on wounds; and on death by fire, spontaneous combustion; death by lightning, cold and starvation.

The whole closes with an essay on toxicology, divided into chapters on poisoning in general, and upon the individual poisons arranged in distinct classes. "In treating this important subject," says the author, "an attempt has been made to render the tests for the poisons more easy of comprehension and to impress them more effectually on the memory, by first arranging them in the order in which they would be applied, on the supposition that the substance submitted to analysis was unknown, and then adding such as are most characteristic of the poison in question. Some useful analytical tables, on a new plan, have been added in the appendix. In the case of some of the more important poisons, the value of individual symptoms and the duration of the poisoning have been deduced from a careful and extensive analysis of cases."—Preface.

Such are the plan and arrangement of the work before us, the author having made use of the best treatises extant in its compilation; all of which he freely acknowledges. Notwithstanding this, the charge of plagiarism from Mr. A. Taylor's work has been brought against him by some of the English journals, a charge which we can hardly think well founded, and which the author seeks expressly to provide against, by stating that portions of his work have been taken verbatim from his lectures, and that hence some passages may be found which should have been marked as quotations; an oversight which would cause him much regret, as it would be entirely unintentional.

It will, however, be found to be an excellent manual of medical jurisprudence, containing all that is useful and important for the student or practitioner, whether medical or legal, to know upon the subjects enumerated. It must be admitted, however, that the additions of the indefatigable and competent American editor, have contributed not a little to this result, they amounting to a fifth, if not one-fourth of the whole work, and "adapting the publication to the existing laws and institutions of this country." C. R. K.

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ART. XXVI.—*The Principles and Practice of Dental Surgery.* By CHAPIN A. HARRIS, M. D., D. D. S., Prof. of Pract. Dentistry and Dental Pathology in the Baltimore College of Dental Surgery, &c. &c. &c. Second edition, revised, modified and greatly enlarged. Illustrated by 69 wood engravings. Philadelphia: Lindsay and Blakiston, 1845: pp. 600, 8vo.

THE early call for a second edition of this work shows the favourable estimation in which it is held by the profession. The author has embraced the opportunity to greatly enlarge and improve his work. Among the additions we notice a description of the several structures which enter into the composition of the mouth; an account of the physical characteristics of the teeth, gums, salivary calculus, &c., and an exposition of the diseases of the maxillary sinus.

It appears to us to be a very good elementary treatise on dental medicine and surgery, and we commend it to the attention of students of dentistry.

ART. XXVII.—*Annual Oration delivered before the Philadelphia Medical Society, by appointment, at the opening of its session of* 1844–45. By D. FRANCIS CONDIE, M. D., Honorary Member of the Society. Published by order of the Society. Philadelphia, 1845: pp. 24, 8vo.

THIS is a very sensible and well-written discourse. The author has been most happy in the selection of his subject, and equally so in the manner in which he has treated it. No topic could be found more appropriate to the occasion, or more replete with interest and instruction than that chosen by Dr. Condie—"an examination into the actual condition and future prospects of the medical profession in the United States."

Dr. Condie has fearlessly exposed the existing condition of the profession,—endeavoured to show the causes of its being no longer held in proper respect, and enjoying sufficient influence, and suggested such measures as he conceives would restore it to the lofty and commanding position to which it is justly entitled.

We regret that we have space only for the following extract:

"The true value of the physician—his competency to fulfil the important duties required of him—and his faithfulness in their fulfilment, can, with difficulty, be correctly and fully estimated by any other than a member of his own profession. Medicine is, unquestionably, one of the most difficult sciences properly to acquire—demanding not only the highest grade of natural ability, but long years of close and laborious study, and an acquaintance with many collateral branches of knowledge. It has, indeed, been correctly remarked, that there is scarcely any circle of human learning, upon the boundaries of which the scientific physician does not necessarily infringe, in some point or other of his extensive orbit. In fact, to acquire that extent of information, and that degree of practical skill necessary to constitute the physician, requires the close and devoted application of all the mind's best energies—under circumstances the most favourable to their full occupation and development. And yet almost every one in the community—whether learned or unlearned—assumes to himself the right to decide, not merely upon the competency of the individual members of the medical profession—which, within certain limits, is his right—but upon the relative value of different medical doctrines and modes of practice.

"The skill of a physician, and consequently the propriety of the remedial measures pursued by him may, unquestionably, be very fairly tested by the general result of his practice—but to do this requires opportunities for observation, and an accuracy of judgment which the members of the community at large do not possess—their decision is consequently founded, in most instances, upon the result of single cases, the circumstances of which are often but imperfectly understood, or entirely misrepresented.

"It is this want of ability in the public to decide correctly upon the value of remedial agents and the competency of medical practitioners—combined with that desire which all alike experience for speedy and certain relief—that renders it, more perhaps than any other cause, the ready dupe of bold pretension and unprincipled empiricism. The vaunted infallibility of any nostrum that promises an immediate restoration of health, becomes far more attractive than the slow and cautious measures pursued by the scientific physician. It is not, therefore, surprising, that the preposterous absurdities of homœopathy—the equally ridiculous and mischievous practices of the Thompsonians, Botanists, and Hydropathists, or the more novel folly of the Crono-thermists, should become more popular than the curative skill exercised by the highest order of medical abilities, accompanied by the greatest natural and acquired advantages."

# SUMMARY

OF THE

# IMPROVEMENTS AND DISCOVERIES

IN THE

# MEDICAL SCIENCES.

## ANATOMY AND PHYSIOLOGY.

1. *On the Structure of the ultimate Fibril of the Muscles of Animal Life.* By Erasmus Wilson, Esq., Lecturer on Anatomy, &c. (*Proceedings of the Royal Society, June* 20, 1844.)—By resorting to peculiar methods of manipulation, and employing a microscope of more than ordinary power, Mr. Wilson, with the assistance of Mr. Lealand, has succeeded in discovering the real structure of the ultimate muscular fibril in a specimen taken from the arm of a strong healthy man immediately after its amputation. He finds each fibril to be composed of minute cells disposed in a linear series, flattened at their surfaces of apposition, and so compressed in the longitudinal direction as to have no marginal indentation on the surface; thus constituting a uniform cylinder divided into minute subdivisions by transverse septa, which are formed by the adherent surfaces of contiguous cells. The diameter of the fibril in the state of relaxation is the 20,000th part of an inch. The cells are filled with a transparent substance to which the author gives the name of myoline, and which differs in its refractive density in different cells. In four consecutive cells the myoline is of greater density than in the four succeeding cells, and this alternation is repeated throughout the whole course of the fibril. In consequence of all the fibrils composing the ultimate fasciculus having the same structures, and the cells, which are in lateral juxtaposition, containing myoline of the same density, they act similarly on light, and the whole presents to the eye of the microscopic observer a succession of striæ or bands, dark and luminous alternately, and transverse to the direction of the fasciculus; an appearance which has been noticed by preceding observers, but of which the cause had not been hitherto ascertained. A dark striæ may occasionally appear as a luminous one, and vice versa, when viewed by light transmitted at different degrees of obliquity.

The structure here described, the author remarks, reduces the muscular fibre to the simple type of organization exhibited in the combination of a series of cells, associating it with other tissues of cell formation, and will, probably, he thinks, open new sources of explanation of the immediate agency of muscular action, a power hitherto involved in the deepest mystery.

2. *Lymphatic Hearts.*—By Prof. Stannius* the full discovery has been made of the existence of lymphatic hearts in birds, analogous to those in reptiles. He has found them already in the stork, ostrich, cassowary, goose, swan, diver, and hawk; and in all, with the exception of the last two, has found the walls of the heart formed by transversely striated muscular fibres. In the ostrich and cassowary these fibres form a layer from half a line to a line in thickness: in the *natatores* it cannot be discerned with the naked eye, but can (though, in some, still very sparingly) with the aid of the microscope.

It is the existence of these fibres which gives to these organs (already described

* Muller's Archiv., 1843, Heft v.

as lymph-vesicles by Panizza) the right to be considered hearts. Their positions and connections vary much in different birds. In all, several lymphatic vessels open into the cavity of the heart, and a vein proceeds from it which passes under the os ilii and joins the vena cava inferior. Lymph only has been seen in them, and they always have valves which prevent the passage of the lymph backwards into its vessels, and that of the blood from the vein into the lymphatic heart. In the swan and goose, in which alone these hearts have been observed during life, no active independent motion of their walls has yet been clearly seen, though there has been an appearance of a slow approximation of their walls, expelling their contents.—PAGET's *Report in B. & F. Med. Rev.*, Jan., 1845.

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3. *Anatomy of Cells.*—Numerous examples of molecular movements of the granules in cells are described by Mr. ADDISON.* They are seen especially in the pale corpuscles of the blood, pus-globules, and mucus-globules, which all appear full of minute molecules in energetic movement. Prof. RATHKE,† also, has often observed similar movements of particles within the nuclei of the cells of the ova of the frog, river crayfish, &c. But he shows that these movements depend, in all probability, on the currents produced in the fluid contents of the nuclei, by the imbibition of some of the water in which they are examined; for in every case in which they happen, the nuclei and cells become gradually larger; and, by examining them in oil, they neither enlarge nor exhibit the molecular movement. In this way may be probably explained the molecular movement of the pigment-granules of the choroid as seen within the cells. But the facts will not explain the observation of Dr. Sharpey,‡ who has seen pigment-granules coursing round and round within the spherical epithelium-cells of a tadpole, and making the complete circuit of its cavity.—*Ibid.*, April, 1845.

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4. *Structure and Functions of the Skin and its Appendages.*—A complete examination of the structure and some of the functions of the skin and its appendages, with many original observations, has been published by Professor KRAUSE.§ Of course, the sizes and weights of every thing that can be so estimated are given. In explanation of the colour produced in the epidermis by nitrate of silver, and supposed to depend on the decomposition of the tissue, Krause says that if thin-cut layers of epidermis soaked in a solution of nitrate of silver be exposed to the light, and then made transparent by acetic acid, their texture may be seen to be unaltered, but there are very dark granules from 1-1000th to 1-1500th of a line in diameter, on the outside of the larger cells, which are, no doubt, chloride of silver and reduced silver, and to these, not to a decomposed tissue, the change of colour is due.

Krause says, also, that the colour of the cuticle of the negro does not depend (as Henle supposes,) on pigment-cells, like those of the pigmentum nigrum, lying between the cutis and rete, and mingled with the cells of the latter, but, chiefly, on the colour of the proper nuclei, and cells of the epidermis. There are indeed some few pigment-cells mingled with the proper cells of the middle and superficial layers of the epidermis; but they are distinguished from those of the pigmentum nigrum by containing far fewer pigment-granules, and by having always a dark (not a clear) nucleus. The colour depends especially on the dark or almost black-brown colour of the nuclei, whether free in the deep layer of epidermis, or surrounded by cells. They have dark nucleoli, sharp outlines, appear only very obscurely granular, and cannot be broken into smaller pigment-granules. The cells surrounding them may be seen: in the deeper layers; they also are uniformly dark, though less dark than the nuclei. In the middle and superficial layers, the nuclei, as long as they can be seen, are still dark; the cells are much paler, but brownish and darker than in the corresponding layers in uncoloured persons.

The so-called *Tyson's glands*, the little white elevations which are usually found

* Provincial Med. and Surg. Journal, March 9 and June 5, 1844.

† Müller's Archiv, 1843, Heft vi.

‡ Quain's Anatomy, 1843, p. lvi.

§ In the unfinished article *Haut* in Wagner's Handworterbuch der Physiologie, Lief. vii.

round the corona glandis of the human penis, and which, after many disputes, have been usually considered as the secerment follicles of the *smegma preputii*, have been carefully examined by Dr. G. Simon.* They are, he says, no more than small round elevations of cutis covered by papillæ and epitheleum. They consist of fibro-cellular tissue like that of the rest of the cutis; and the papillæ on them have no peculiar characters. The only function that can be ascribed to them is that of increasing the sensibility of the glans. The only organs which Simon could find for the special secretion of the *smegma*, (and these are not constant,) are whitish corpuscles lying in or beneath the cutis, which, with the microscope, appear as small roundish sacculi, closed below, and opening by a narrow orifice on the surface, and containing a white substance. These are usually situated on or behind the corona glandis, in front of or near the frænum, and sometimes on the anterior surface of the glans itself. Two or three may be found, or, in a few cases, as many as six.—*Ibid.*

5. *Peripheral termination of the Nerve-fibres.*—The investigations of Henle and Kölliker† have proved a new and peculiar mode of termination of the nerve-fibres in the little bodies, seated especially in the nerves of the fingers and toes, which were discovered and to a certain point well described by Pacini of Padua, in 1830. These bodies (to which the name of *Pacinian corpuscles* is now given), are found in man at all ages after the twenty-second week of fœtal life, and under all circumstances, and in many mammalia. They are most numerous on the cutaneous nerves of the hands and feet; but they occur also sometimes on other sensitive cerebro-spinal nerves, and on the sympathetic plexuses in the mesentery and mesocolon, and about the pancreas; where they are especially numerous in cats. In man, from 150 to 350 may be counted on a single limb; and they are chiefly abundant on the branches of the digital nerves just penetrating the cutis; to which they are attached singly, or in pairs, or sometimes in groups, by little fibro-cellular pedicles. Through the pedicle of each, a single primitive nerve-fibril passes into the corpuscle.

The corpuscles are of various form, elliptic, ovate, obovate, crescentic, or reniform: they measure, (in parts of a line,) from .66 to 1.2 in length, and from .45 to .6 in breadth. They are semi-transparent, slightly glistening, and appear as if a central cord passed through them. Each of them is composed of from 40 to 60 very thin coats, arranged round a central canal or cavity, like so many capsules enclosed one within another; and each coat or capsule is composed of two layers of fibro-cellular tissue, an outer layer with circular, and an inner with longitudinal fibres. Between each two adjacent layers or capsules, there is an albuminous fluid; it is most abundant between the outer capsules, which are less compactly arranged than the central ones. The outermost of all the capsules in each corpuscle is connected by cellular tissue with the adjacent parts, from which also blood-vessels penetrate inwards through more than half the layers. Here and there the adjacent capsules appear connected by partial septa extending across the spaces containing the fluid, and this is especially the case at the end opposite to the pedicle. The canal or cavity in the axis of each corpuscle contains a fluid like that between the capsules, and, in this fluid, a primitive nerve-fibril. The nerve-fibril, after traversing the pedicle of the corpuscle, and a conical prolongation from the end of the pedicle through the substance of the lower part of the corpuscle, enters the cavity, and at once becomes smaller, paler, and flatter. It passes along the cavity, and at or near its distal end, terminates in a knob, or by bifurcating: in no case is any thing formed like the *terminal loops* of nerves, and it is very rarely that more than one nervous fibril enters a corpuscle; neither does the terminal enlargement of the nerve-fibril resemble a ganglion corpuscle.

Of the use of these bodies little can be said. It is suggested that as their construction with alternate layers of membrane and fluid is rather like that of the electric organs of the electric ray, &c., these also may be electric organs, and, according to Pacini, the chief agents in mesmeric operations. But Henle and Kölliker could find no manifestations of free electricity in them during life. Their

* Muller's Archiv., 1844, Heft i.

† Ueber die Pacinischen Körperchen; Zurich, 1844, 4to.

not occurring upon any known motor nerves, would appear to prove that they have nothing to do with motion; but their existence on many nerves of the sympathetic system, and their non-existence on many sensitive nerves, make it also probable that they are not connected with acuteness of sensation. They may be electric organs, as their peculiar structure suggests; but before they can be concluded to have any relation to animal magnetism, it would be advisable to prove that *that* has any relation (except in name), to physical magnetism or any form of electricity.—*Ibid.*

6. *Circulation in the Lungs.*—Mr. Erichsen,* in an essay to prove that the real cause of death after the sudden introduction of air into the veins, is the difficulty of the passage of frothy blood through the pulmonary capillaries, relates this experiment; a pressure equal to that of from one and a half to two inches of mercury is sufficient to drive bullock's blood, deprived of fibrin, through the capillaries of the lungs of a dog recently killed; but if air be previously blown into the pulmonary artery it will require a pressure equal to that of from three to three and a half inches of mercury to force similar blood through the same set of vessels. The pulmonary circulation being thus arrested, the left ventricle receives an insufficient supply of blood, and respiration ceases in consequence of the defective quantity of arterial blood sent to the nervous centres. But, for some time after respiration has ceased and animal life has nearly ceased, the heart continues to act regularly and forcibly; nor do its right cavities ever become so distended as they are in ordinary asphyxia, unless the air have been forcibly blown into the veins.—*Ibid.*, Jan., 1845.

7. *Long abstinence.*—Dr. Casper relates in his *Wochenschrift*, (June 8, 1844,) a case of voluntary total abstinence from food and drink. The patient was thirty-six years old. For the first five days he suffered little and confessed neither hunger nor thirst; during this time also he passed no feces and very little urine. After this he became thinner and paler, his sight was weak, he had occasional ringing in the ears, his speech was indistinct, his breath smelt unpleasantly, he discharged only a little urine, his abdomen sank in, and he was very weak. These conditions were increased on the ninth day, and he could not resist taking a little sugared water. In the night of the tenth day hunger, which he had before hardly felt, returned irresistibly, and he took food and recovered. Mitscherlich examined the urine which was passed at the middle of his abstinence, and found that it did not differ from that of a healthy person.

8. *Recurrence of menstruation at an advanced age.*—MM. Muryncx and Kluysens relate in the *Annales et Bulletin de la Société de Méd. de Gand*, two cases in which menstruation recurred several years after it had ceased, and continued to a very advanced. The subjects of both cases were nuns. In one, menstruation had ceased at the age of 52, and recurred at the age of 62, and continued when the case was recorded, at the age of 73, with perfect regularity. What is curious, the patient was attacked on the cessation of her menstrual discharge with gastralgia, which persisted in spite of various remedies, until the recurrence of the discharge, when it left her and her health became perfect. In the second case, the menstrual discharge ceased at the age of 52 also; it recurred at the age of 60, and has continued up to the date of the report, when the patient was 90 years of age. This patient was attacked on the cessation of menstruation with violent colics, followed by tic douloureux, which resisted all treatment, but ceased on the recurrence of the menstrual discharge, and the patient, at the age of 90, was in the enjoyment of health, with all her faculties perfect, and with the tastes and ideas belonging to youth.

9. *Complete absence of the Bladder.*—M. Leitch has recorded in the *Journal de Méd de Bordeaux* a very interesting example of this exceedingly rare monstrosity, of which Meckel does not give a single case; Lieutaud, however, relates one, and Pinninger a second case.

* Edin. Med. and Surg. Journal, Jan., 1844.

The subject of M. LEITCH's case was a man aged 40 years, who died in consequence of a fracture of the femur. The following were the peculiarities revealed on *post-mortem* examination:

The general appearance of the body resembled that of a female. The skin was soft, the limbs slender, and the shoulders narrow. There was no trace of penis or scrotum, and the umbilicus appeared also to be absent.

Above the pubes there was a small orifice, around which slight excoriations were observed, produced by the flow of urine; a projection near this opening appeared to be the umbilical cicatrix.

On each side of the pubes there was a small eminence covered with a perfectly smooth skin, containing the testicles; the horizontal branches of the pubic bones were absent,—their place was supplied by cartilage; the pyramidal muscles were also wanting. Not the least trace of a bladder could be found. The ureters extended to the orifice just noticed, which was, in fact, formed by their junction. Nothing could be discovered which resembled even a portion of the bladder. The right ureter, however, was enormously enlarged; from the pelvis of the kidney to its external termination being the size of the small intestine. Near its orifice it contracted to the diameter of a goose quill, and at this place some muscular fibres could readily be distinguished. This distended ureter had doubtless, to a certain extent, fulfilled the office of the bladder, and the muscular fibres at its orifice acted as a sphincter. The left ureter was in a natural state. The testicles were small, but healthy; the vesiculæ seminales existed, although imperfectly developed; the prostate gland, which was very small, was situated behind the point of union of the ureters; the vasa differentia terminated in two or three small orifices near the external opening.

This man had managed to conceal his deformity. He had sexual desires, and had several times been on the point of marrying.

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## ORGANIC CHEMISTRY.

10. *Researches on the composition of Blood in health and in disease.*—The Nos. of the *Gazette Médicale de Paris*, for Nov. 23 and 30, and Dec. 7, 14 and 21, 1844, contain an extremely interesting memoir on this subject presented to the French Academy of Medicine in November last, by MM. BECQUEREL and RODIER, of which we shall give a brief analysis.

### I.—*Blood in Health.*

After a preliminary account of their mode of analysis, MM. B. and R. give the following tables exhibiting the composition of healthy blood.

#### 1. *Natural composition of the blood in man.*

The following table exhibits the mean composition, and also the maximum and minimum of the blood in 11 cases.

*Composition of* 1000 *grammes of blood of man in health.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Density of the defibrinated blood | 1060.2 | 1062 | 1058 |
| Do. of the serum | 1028 | 1030 | 1027 |
| Water | 779 | 800 | 760 |
| Globules | 141.1 | 152 | 131 |
| Albumen | 69.4 | 73 | 62 |
| Fibrin | 2.2 | 3.5 | 1.5 |
| Extractive matters and free salts | 6.8 | 8.0 | 5 |
| Fatty matters | 1.600 | 3.255 | 1.000 |
| Seroline | 0.020 | 0.080 | — |
| Fatty phosphorated matter | 0.488 | 1.000 | 0.270 |
| Cholesterine | 0.088 | 0.175 | 0.030 |
| Soapy matter | 1.004 | 2.100 | 0.700 |

1000 *grammes of calcined blood.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Chloride of sodium - - - | 3.1 | 4.2 | 2.3 |
| Soluble salts - - - | 2.5 | 3.2 | 2.0 |
| Phosphates - - - - | 0.334 | 0.7 | 0.225 |
| Iron - - - - - | 0.565 | 0.633 | 0.508 |

From those numbers the following important conclusions may be deduced:—

1. The limits within which the composition of healthy blood varies, are small, and probably depend on age, constitution, and diet.

2. The number for the globules exceeds 127, which has hitherto been generally admitted to express their physiological mean. This depends on a distinction not having been made between male and female blood, and probably also on this, that the blood analyzed to determine that mean was not taken from persons really in health.

3. The number for the fibrin 2.2 is below the number 3, which is that generally admitted. MM. B. and R. are, too, satisfied of their accuracy to admit that the error lies with them.

As to the influence of *age*, MM. B. and R. have no analysis below the age of 20. From 20 to 30, the mean they obtained were accurately conformable to the general mean. From 30 to 40, the composition of the blood in every instance corresponded to the general mean very nearly; the only principle which was constantly augmented was cholesterine, and it was nearly doubled. From 50 to 66, there was little difference, save a diminution in the quantity of fibrin, the mean quantity of which was represented by 2. The influence of *constitution* and of diet could not be appreciated, save that the authors of the memoir consider that the quantity of cholesterine increases as the diet is improved.

2. *Composition of the blood in the healthy female.*

The following table exhibits the result of the analysis of the blood of eight women. Their ages were from 22 to 58.

*Composition of* 1000 *grammes of blood of the healthy female.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Density of the defibrinated blood - | 1057.5 | 1060 | 1054 |
| Do. of serum - - - - | 1027.4 | 1030 | 1026 |
| Water - - - - | 791.1 | 813 | 773 |
| Globules - - - - | 127.2 | 137.5 | 113 |
| Albumen - - - - | 70.5 | 75.5 | 65 |
| Fibrin - - - - - | 2.2 | 2.5 | 1.8 |
| Extractive matters and free salts - | 7.4 | 8.5 | 6.2 |
| Fatty matters - - - - | 1.620 | 2.860 | 1 |
| Seroline - - - - | 0.020 | 0.060 | — |
| Fatty phosphorated matter - - | 0.464 | 0.800 | 0.250 |
| Cholesterine - - - - | 0.090 | 0.200 | 0.025 |
| Soapy matter - - - - | 0.046 | 1.800 | 0.725 |

1000 *grammes of calcined blood.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Chloride of sodium - - - | 3.9 | 4.0 | 3.5 |
| Soluble salts - - - - | 2.9 | 3.0 | 2.5 |
| Phosphates - - - - | 0.354 | 0.650 | 0.250 |
| Iron - - - - - | 0.541 | 0.575 | 0.486 |

A comparison of these figures, with those furnished by the analysis of healthy blood, lead to some important conclusions. First, the numbers obtained in these eight analyses do not agree so closely as do those obtained in the analyses of male blood, the limits between the *maxima* and *minima* being greater. It is difficult to account for this, but the same difference will be found to exist in the female in disease. The mean density of defibrinated blood is less than in the male, consequently female blood contains less solid contents, and more water. The mean density of the serum is the same as in man. The proportion of globules is less in the female than in man, and in this diminution of globules consists the

fundamental difference between the two kinds of blood. The mean of the globules is 127; the maximum 137; the minimum 113. In man, we have 141 for the mean, 151 for maximum, and 131 for the minimum.

The proportion of fibrin is almost the same in woman as in man; the quantity of albumen is the same in the two sexes; the seroline is alike irregular in both; the fatty phosphorated matter (cerebrine) is also almost in equal quantity in each; the chloride of sodium and the various soluble salts are in almost the same proportion in both sexes, and the iron is in each proportional to the weight of the globules. Menstruation exerts a powerful influence on the natural composition of the blood, and chiefly affects the globules. From a careful analysis of the facts in our possession, we conclude that before menstruation commences the quantity of globules is below 127; if menstruation is imperfectly established, if it is incomplete and irregular, the figure remains below the mean; the moment the function is well established it ascends and fluctuates between 127 and 137; after the critical period of life, when menstruation ceases, the number falls again, in one case to 113, in another to 121.

### 3. *Of the blood during pregnancy.*

Pregnancy exerts a marked influence on the composition of the blood, causing a diminution of globules and of the albumen; a slight augmentation of the fibrin and of the phosphorated fatty matter and an increase of the water.

The following table exhibits the results of the analysis of nine pregnant women.

*Composition of the blood in pregnancy.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Density of the defibrinated blood | 1051.5 | 1055.1 | 1046.2 |
| Do. of the serum, | 1025.5 | 1026.8 | 1023.6 |
| Water | 801.6 | — | — |
| Globules | 111.8 | 127.1 | 87.7 |
| Albumen | 66.1 | 68.8 | 62.4 |
| Fibrin | 3.5 | 4 | 2.5 |
| Extractive matters and free salts | 6.6 | 8.7 | 4.7 |
| Fatty matters | 1.922 | 2.519 | 1.158 |
| Seroline | Varia. | 0.108 | 0.018 |
| Fatty phosphorated matter | 0.646 | 0.863 | 0.381 |
| Cholesterine | 0.061 | 0.225 | 0.030 |
| Soapy matter | 1.195 | 1.323 | 0.737 |

1000 *grammes of calcined blood.*

| | Mean. | Max. | Min. |
|---|---|---|---|
| Chloride of sodium | 3.2 | 3.9 | 2.3 |
| Soluble salts | 2.4 | 2.8 | 1.8 |
| Phosphates | 0.425 | 0.690 | 0.282 |
| Iron | 0.449 | 0.490 | 0.370 |

The following conclusions may be deduced from this table:—In pregnancy, when not far advanced, and when it has not yet exerted any sensible influence on the constitution, the blood may not be obviously altered, but it becomes sensibly modified as pregnancy advances. The other conclusions that may be deduced have been already stated by anticipation. Although all the pregnant women whose blood was analyzed, had it impoverished, they were nevertheless all plethoric; all complained of headache, vertigo, tinnitus aurium, some of them were somnolent, and generally depressed, and they were all decidedly relieved by venesection.

## II.—*Blood in Disease.*

The causes that modify the state of the blood, in the opinion of the authors of the memoir, are eight in number, and may be expressed as general laws as follows. It may be premised that MM. Becquerel and Rodier consider that the modifications of the blood that occur in disease are the consequences and not the cause of the disease; excepting two important cases in which the modifications of the blood are the source of the malady—namely, most diseases caused by

marsh miasmata and certain fevers, such as typhoid and yellow fever and the plague.

First Law.—*The mere fact of the development of a disease almost always decidedly modifies the composition of the blood; this modification is almost always the same in most cases.*

When an acute disease is entirely local, the composition of the blood is not affected. But if it produces constitutional disturbance either primarily or secondarily, then the blood becomes modified from the mere fact of the individual being unwell. They have deduced the fundamental modification produced in the blood from 120 analyses of the blood first abstracted from persons labouring under well determined diseases—bronchitis, pneumonia, pleurisy, acute rheumatism, typhoid fever, tubercular phthisis, &c. The results obtained in man and woman are stated separately, because of the great difference in the composition of the blood in the two sexes. The two following tables represent pretty accurately the mean modifications in the blood from the mere fact of an individual being affected with disease. The quantity of fibrin is not stated in the table, as the modifications of that principle are subject to other and much more complicated influences which must be hereafter considered:—

*Mean composition of the blood in acute diseases.*

| | Man. | Woman. |
|---|---|---|
| Density of defibrinated blood | 1056 | 1055 |
| Do. of serum | 1027 | 1026 |
| Water | 800 | 804 |
| Globules | 125 | 118 |
| Albumen | 66 | 65 |
| Extractive matter and free salts | 7 | 7.5 |
| Fatty matter | 1.700 | 1.700 |
| Seroline | Variable. | Variable. |
| Phosphorated matter | 0.560 | 0.600 |
| Cholesterine | 0.110 | 0.130 |
| Soapy matter | 1 | 0.900 |
| 1000 *grammes of calcined blood.* | | |
| Chloride of sodium | 3.1 | 3.0 |
| Soluble salts | 2.6 | 2.5 |
| Phosphates | 0.450 | 0.450 |
| Iron | 0.500 | 0.490 |

From a comparison of those two tables we may conclude—that the development of disease causes a diminution of the density of defibrinated blood—diminution of the density of the serum—very marked diminution of the globules—sensible but less decided diminution of the albumen, (and which do not appear in the table, because of the numerous phlegmasiæ among the 120 cases)—slight increase of the sum of the fatty matters—obvious increase of the insoluble phosphates—no change in the proportion of extractive matters, animal soap, soluble salts, or iron, which is always proportional to the globules. The means set forth in the tables are not constant but fluctuate. 1. When the disease is slight, or does not react on the entire system, or when the blood is abstracted very early in the disease, in which cases the blood may be but slightly altered—a proof that the alteration in the composition of the blood is a consequence, not a cause, of disease. 2. On the other hand, when the malady is intense, or the blood drawn at an advanced stage of its progress, the alterations are more decided.

Second Law.—*Bleeding exerts a remarkable influence on the composition of the blood, the greater the oftener the bleeding is repeated.*

MM. Andral and Gavaret established that the chief effect of loss of blood is to diminish the proportion of the globules. The researches of MM. B. and R. confirm this statement. The three following tables show the results of the first, second, and third venesections performed on a certain number of M. Cruveilhier's patients. Ten patients were bled twice, and 10 thrice, which gives 20 first and second, and 10 third bleedings:

*Mean composition of the blood in 20 patients bled twice.*

| | 1st venesection. | 2d venesection. |
|---|---|---|
| Density of defibrinated blood | 1055 | 1051.2 |
| Do of serum | 1026.1 | 1025.3 |
| Water | 796.2 | 812 |
| Globules | 125.4 | 112 |
| Albumen | 62.2 | 62.5 |
| Fibrin | 3.7 | 3.8 |
| Extractive matter and free salts | 6.8 | 7.6 |
| Fatty matter | 1.657 | 1.560 |
| Seroline | 0.027 | 0.047 |
| Phosphorated matter | 0.490 | 0.465 |
| Cholesterine | 0.178 | 0.150 |
| Soapy matter | 0.962 | 0.900 |
| 1000 *parts of calcined blood.* | | |
| Chloride of sodium | 2.8 | 3.4 |
| Soluble salts | 2.7 | 2.5 |
| Phosphates | 0.435 | 0.417 |
| Iron | 0.527 | 0.488 |

*Mean composition of the blood in 10 patients bled three times.*

| | 1st venesection. | 2d venesection. | 3d venesection. |
|---|---|---|---|
| Density of defibrinated blood | 1056 | 1053 | 1049.6 |
| Do. of serum | 1025.8 | 1026.3 | 1025.6 |
| Water | 793.2 | 807.7 | 823.1 |
| Globules | 129.2 | 116.3 | 99.2 |
| Albumen | 65 | 63.7 | 64.6 |
| Fibrin | 3.5 | 3.8 | 3.4 |
| Extractive matter and free salts | 7.7 | 6.9 | 8 |
| Fatty matter | 1.662 | 1.584 | 1.530 |
| Seroline | 0.026 | 0.088 | 0.012 |
| Phosphorated matter | 0.637 | 0.489 | 0.450 |
| Cholesterine | 0.106 | 0.156 | 0.149 |
| Soapy matter | 0.893 | 0.851 | 0.919 |
| 1000 *parts of calcined blood.* | | | |
| Chloride of sodium | 2.8 | 3.5 | 3 |
| Soluble salts | 2.6 | 2.5 | 2.7 |
| Phosphates | 0.404 | 0.493 | 0.348 |
| Iron | 0.513 | 0.471 | 0.468 |

As blood is abstracted, that fluid becomes impoverished and more watery, whence the density of defibrinated blood diminishes notably; the albumen also diminishes, but usually only slightly so, whence the diminution of the density of the serum is small; the fibrin is quite uninfluenced by venesection; the extractive matters and free salts are unaltered; the fatty matters are slightly lessened; the seroline, always variable, decidedly increased in some cases; the cholesterine seemed slightly increased; the chloride of sodium and other salts remained unchanged; the iron diminished slightly, being proportional to the globules.

THIRD LAW.—*Plethora and its accompanying symptoms probably result from an increase of the quantity of blood naturally contained in the system, but not from any alteration in the composition of that liquid, and particularly not from an increase of the proportion of its globules.*

MM. AMUSSAT and GAVARET attribute plethora to an increase in the proportion of globules naturally contained in the blood. The numbers on which they found this opinion cannot be questioned, but are wrongly interpreted. Undoubtedly, if the number they adopt 127-1000, as representing the quantity of fibrin naturally contained in the blood were correct, their conclusion would be legitimate; but we think we have shown that the above number is too low, and we thence conclude that the numbers which they give as expressing the proportion of globules in plethoric blood indicate healthy blood. From our experiments we conclude

that in plethora the composition of the blood remains natural. Six men presenting all the characters of plethora were bled; they were, respectively, 24, 27, 28, 35, 38, and 48 years old. A plethoric woman, 21 years of age, was also bled. The following table exhibits the mean composition of the blood of those six men and one woman:—

| | Mean of 6 men. | 1 woman. |
|---|---|---|
| Density of blood defibrinated | 1059 | 1059 |
| Do. of serum | 1028.3 | 1028.8 |
| Water | 780.4 | 784 |
| Globules | 138 | 131.5 |
| Albumen | 72.3 | 75.1 |
| Fibrin | 2.4 | 2.1 |
| Extractive matter and free salts | 6.3 | 5.8 |
| Fatty matter | 1.555 | 2.150 |
| Seroline | Variable. | 0.025 |
| Phosphorated matter | 0.433 | 0.673 |
| Cholesterine | 0.088 | 0.144 |
| Soapy matter | 1.014 | 1.038 |
| 1000 *parts of calcined blood.* | | |
| Chloride of sodium | 3.7 | 3.5 |
| Soluble salts | 2.9 | 2.8 |
| Phosphates | 0.341 | 0.334 |
| Iron | 0.547 | 0.544 |

The means in this table are exactly the same as those of healthy blood, excepting a slight increase of the proportion of albumen. The examination of each particular case confirms this result, which, however, seems unimportant, the increase is so slight. The proportion of fibrin was very irregular in the six cases; in one it was natural (2.2); in three it was much increased (3.2, 3.5, 3.5); in two, finally, it was very deficient (1 and 1.1); the two latter individuals were very robust, and presented but moderate symptoms of plethora.

Fourth Law.—*A diminution of the proportion of the globules of the blood characterizing anæmia, frequently occurs in diseases either as an essential character of disease, or as a complication or a consecutive phenomenon.*

The general condition termed anæmia occurs in—1, chlorosis; 2, after repeated bleedings or copious hemorrhages; 3, after a considerable evacuation of any of the fluids, as from copious diarrhœa or suppuration; 4, in poisoning by lead, and during protracted intermittent fevers; 5, during convalescence from debilitating diseases; 6, in ill-fed persons; 7, in individuals inhabiting damp unhealthy localities.

The following table gives the result of 35 analyses of the blood, showing its mean composition in as many cases of anæmia, developed from various causes, in all of which there existed a continued or intermittent bruit de soufflet in the carotids, which, according to the researches of MM. Andral and Gavaret, necessarily occurs whenever the proportion of the globules sustains a certain diminution. We shall hereafter consider whether the bruit de soufflet can exist without the proportion of globules being diminished:

| | Mean. |
|---|---|
| Density of defibrinated blood | 1047.4 |
| Do. of serum | 1017.1 |
| Water | 822 |
| Globules | 94.7 |
| Albumen | 68 |
| Fibrin | 3.5 |
| Extractive matter and free salts | 8 |
| Fatty matter | 1.806 |
| Seroline | Variable. |
| Phosphorated matter | 0.663 |
| Cholesterine | 0.110 |
| Soapy matter | 0.992 |

1000 *grammes of calcined blood.*

| | |
|---|---|
| Chloride of sodium | 3.5 |
| Soluble salts | 2.4 |
| Phosphates | 0.545 |
| Iron | 0.366 |

It thus appears—1st. That there is considerable diminution of the density of the blood when defibrinated, which is explained by the diminution of the globules; 2d, that the serum retains its density, the albumen not being diminished; 3d, that the globules are decidedly diminished; 4th, that the fibrin is slightly increased (3.5 instead of 2.2).

Fifth Law.—*The development of phlegmasia causes remarkable modifications in the composition of the blood, especially a considerable increase of fibrin.*

This law has been already established by MM. Andral and Gavaret, and is fully confirmed by the results of our researches, as set forth in the following table, which gives the means obtained from the analysis of blood in a considerable number of cases of well marked inflammation. The marked difference that exists between the two sexes renders it necessary to tabulate the results in two separate columns:

| | Males. | Females. |
|---|---|---|
| Density of defibrinated blood | 1056.3 | 1054.5 |
| Do. of serum | 1027 | 1026.8 |
| Water | 791.5 | 801 |
| Globules | 128 | 118.6 |
| Albumen | 66 | 65.8 |
| Fibrin | 5.8 | 5.7 |
| Extractive matter and free salts | 7 | 7 |
| Fatty matter | 1.742 | 1.669 |
| Seroline | 0.020 | 0.024 |
| Phosphorated matter | 0.602 | 0.024 |
| Cholesterine | 0.136 | 0.130 |
| Soapy matter | 0.984 | 0.014 |
| 1000 *grammes of calcined blood.* | | |
| Chloride of sodium | 3.1 | 3.0 |
| Soluble salts | 2.4 | 2.7 |
| Phosphates | 8.448 | 0.344 |
| Iron | 0.490 | 0.480 |

The fibrin and cholesterine are increased; the albumen is diminished in quantity. Recent researches tend to lead to the idea that fibrin and albumen are identical, or at least that fibrin is derived from albumen. May not, then, the increase in the quantity of fibrin observed in inflammations be explained by the transformation of a certain quantity of albumen into fibrin? This question can be elucidated by seeing whether the sum of the augmented fibrin and diminished albumen in inflammations equals the sum of the albumen and fibrin in healthy blood. In the healthy male the sum of those two principles gives 71.5; in the female 72. If we add these two principles in the blood drawn in inflammations, we get the numbers 71.6 in man, and 70.5 in woman: those numbers nearly correspond in man, but differ in woman.

Sixth Law.—*The proportion of fibrin in the blood may diminish, and its physical properties may perhaps be changed by a number of circumstances referable to two classes. 1. Poisoning, including typhus, yellow fever, and intermittent fevers, the plague, &c. 2. Insufficient nutrition; but this diminution does not necessarily occur.*

[The authors of the memoir say generally that they have found this proposition confirmed by their researches, the results of which are not given numerically.]

Seventh Law.—*When a secretion is suspended or diminished it often occurs that a certain number of the principles contained in the secretion in question are concentrated in the blood.*

[In support of this law, the authors of the memoir refer to the experiments of MM. Dumas and Prevost, who found that on tying the ureters of animals, and thus suppressing the secretion of urine, the blood on analysis yielded urea. They

also refer to a fact which they have themselves ascertained—namely, that whenever the secretion of bile is suppressed, or even diminished, the quantity of cholesterine in the blood increases.]

Eighth Law.—*The albumen of the serum of the blood diminishes considerably under these circumstances; Bright's disease—certain diseases of the heart, accompanied with dropsy, and grave puerperal fever.*

The developments of this proposition are reserved until the diseases here mentioned are considered. The number of facts examined are too few to warrant as yet the positive enunciation of this law, which, however, we believe to be true.

MM. Becquerel and Rodier next consider at great length the composition of the blood in various diseases, and compare their results with those obtained by other observers, especially by MM. Andral and Gavaret, and conclude by the following summary of their researches. The numerous and important results contained in this memoir are of three kinds; some are simply confirmations of the discoveries of our predecessors; others invalidate, in part at least, results hitherto generally admitted; others, again, are entirely new. Those three classes of results may be thus summed up:—

*a.* We have confirmed the following results.

1. Increase of fibrin in the phlegmasiæ, as established by MM. Andral and Gavaret.

2. Diminution of the globules in chlorosis, in anæmia, and under the influence of protracted abstinence—a fact ascertained by M. Lecanu, and confirmed by MM. Andral and Gavaret.

3. Diminution of the globules after hemorrhage, as first indicated by MM. Dumas and Prevost, and confirmed by MM. Andral and Gavaret.

4. The trifling influence of venesection on the fibrin.

5. The diminution of albumen in Bright's disease, pointed out by Gregory, Bostock, Christison, Andral and Gavaret.

*b.* Results which our experiments seem to invalidate.

1. The number 127-1000, stated to represent the general mean of the globules during health, is too low, and the mean is not the same in the two sexes.

2. The number 3-1000, supposed to represent the fibrin, is too high.

3. The supposed augmentation of the globules in plethora, affirmed by M. Lecanu, and admitted by MM. Andral and Gavaret. is erroneous.

4. The supposed, almost constant, diminution of the proportion of fibrin in bad fevers, is also a mistake.

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11. *Composition of the Urine.*—In a highly interesting paper on the constitution of the urine, Liebig* maintains the following points:

A. That neither lactic acid nor any lactate exists in healthy urine; the evidence being, 1, that hitherto no example is known of lactic acid being produced by the decomposition of a nitrogenous substance; 2, that the urine of the herbivora, in which lactic acid or its salts might be expected, (if they existed in that of the carnivora,) does not contain either; 3, that lactic acid has never yet been clearly detected in the urine of men or carnivora; 4, that the carnivora take no food from which lactic acid could, by transformation, be produced; 5, that fresh urine will not dissolve the smallest quantity of barytes, though lactate of barytes is easily soluble in water; 6, that in various and the most careful experiments, it has been impossible to detect even a trace of lactic acid in large quantities of putrid urine, in which, if it had existed when fresh, it could not have been altered by putrefaction, and if it had not existed when fresh, it might, perhaps, have been produced by putrefaction. An organic acid was produced in putrefaction, but it was acetic acid combined with a resinous highly azotised substance.

B. Hippuric acid is a constant constituent of healthy human urine; for 1, benzoic acid is obtained (as Proust observed), with acetic acid, by distilling urine with sulphuric or hydrochloric acid; but, 2, this benzoic acid cannot exist as such in the fresh urine; for benzoic acid is converted in the organism into hippuric acid; and the hippuric acid known to exist in the urine of herbivora yields benzoic acid when it is decomposed; and 3, the existence of hippuric acid may be clearly

* Ann. der Chemie und Pharm., Mai; and Lancet, June 1–8, 1844.

proved in even small quantities of fresh urine, by evaporating it to the consistence of syrup, mixing with it some hydrochloric acid, and agitating it with ether, which dissolves the hippuric acid.*

The hippuric acid thus obtained, cannot be derived from the decomposition of benzoic acid taken in the food, (for probably none of man's food contains any;) it is formed in the body from the non-nitrogenized aliments. The acetic acid does not exist in fresh urine; but it and the resinous substance with which it is combined may be regarded as the products of the decomposition of the colouring matter of the urine.

c. The acid reaction of healthy urine is due to the presence of the acid phosphate of soda, and the mode in which this salt is produced is as follows: alkaline phosphates are taken in meat, flour, and grains; none of these contain any free alkali; and it is from these phosphates and not from any free alkali or alkaline carbonate, that the chyle, lymph, and blood, derive their alkaline reaction. Now, among the remarkable properties of the bibasic phosphates of soda and potass are their relations to uric and hippuric acids. Both these acids dissolve very easily in water, to which common phosphate of soda has been added, and with their solution, the phosphate loses its alkaline, and assumes an acid reaction. And thus, when the uric and hippuric acids are formed in the organism, they combine with the soda of the alkaline phosphate, forming the highly soluble urate and hippurate of soda, and an acid phosphate of soda.

d. But besides this, there is another cause by which the acidity of the urine is maintained and increased. The urine of man and the carnivora contains a large quantity of sulphates; but their food does not contain either those salts ready-formed, or any oxygen-compound of sulphur. The sulphur which it does contain, or (which comes to the same thing), the sulphur of the transformed tissues, must therefore combine with oxygen in the body, and the sulphuric acid thus formed, combining with part of the alkali of the alkaline phosphates, converts them into acid phosphates, and thus maintains and increases the acidity of the urine.

e. It follows that whether the urine will be acid or not, depends upon the nature and quantity of the *bases* taken with the food. If the amount be sufficiently large to neutralize the uric, hippuric, and sulphuric acids formed by the organism, and the acids supplied by the food, the urine must be neutral; if the amount be more than enough, the urine must be alkaline; if less, acid. And hence, no physiological or pathological inference can be drawn from our examination of the urine, unless an account be taken of the inorganic acids, salts, and bases taken with the food.

An exception to the rule that carnivora alone produce uric acid exists in the case of butterflies, (and other lepidoptera?) Heller has discovered that in proportion to the weight of their bodies, they of all animals produce the greatest quantity of uric acid. Their urine is analogous to that of serpents and predatory birds, containing as a chief constituent urate of ammonia; it is principally a product of the metamorphoses which go on in the pupa state, and the red or yellow fluid which they discharge soon after being hatched is chiefly urate of ammonia. The secretion continues in after life.†—Paget's Report in *B. & F. Med. Review*, April, 1845.

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12. *Use of Gelatin in food.*—The Amsterdam commission for determining the nutritive properties of gelatin as obtained from bones by steam, and used in large quantities in "economic soup" in Dutch public institutions, have confirmed the conclusion of the commission of the Paris Institute, that it has had hardly any nutritive properties when taken alone; and, in regard to the important point left unsettled by the French commission, namely, whether, when added to other kinds of food, gelatin contributes to the total amount of nutriment, they have also come to a negative conclusion. None of the three dogs to whom considerable quantities of it

* Liebig estimates the quantity of benzoic acid in the urine to be equal to that of the uric acid. Dr. Golding Bird has never found it exceed one-third of the quantity of the latter. (Med. Gazette, Aug., 23, 1844.)

† Oesterreische Med. Wochenschrift, Sept. 14, 1844.

were, for several long periods, given both alone and in connection with bread and potato-parings, was found to have derived the least benefit, or to have gained any increase of weight from it.

[The experiments were accurately enough made, and warrant the conclusions, as far as "economic soup" and dogs are concerned. But they are so opposed to the results of common observation of the nutritive value of jellies and other like gelatinous food, that some fallacy must be suspected in both these and those of the French commission. Either dogs are improper subjects for such experiments, or, more probably, the mode of preparation decomposes the gelatin. The action of the hot steam to which the bones, already boiled, are subjected for about seven hours in each of several days, may effect a part of the change by which, when it is complete, gelatin loses its power of *setting*, and in which the arrangement of its elements may be so altered, that they cannot be reconstructed in a nutritive form.]—*Ibid.*

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## MATERIA MEDICA AND PHARMACY.

13. *Digitaline.*—M. Bouchardat, in his *Annuaire de Thérapeutique* for 1845, has given an interesting account of digitaline, the active principle of the digitalis purpurea discovered by MM. Homolle and Quevenne:

1*st. Process of extraction.*—One kilogramme of dried leaves of digitalis of the same year's growth, coarsely powdered, and previously moistened, is placed in a displacement apparatus, with carded cotton in the centre, and then treated with cold water, so as to obtain a concentrated solution. The liquids are immediately precipitated by a slight excess of the subacetate of lead, and thrown upon a filter. They pass through limpid, and almost completely colourless. A solution of the carbonate of soda is then added until there is not any precipitate thrown down, and the filtered liquid is freed from the magnesia which it still retains by means of the ammoniacal phosphate. The filtered solution is again precipitated by an excess of tannin, and the precipitate collected on a filter is mixed, while yet moist, with one-fifth part of its weight of oxide of lead (litharge). The soft paste which results, placed between ungummed papers, then dried at the stove, and powdered, is exhausted by concentrated alcohol in a displacement apparatus. The alcoholic solution, decolorized by means of animal charcoal, leaves, as a residuum of evaporation, a yellowish granular mass, which, washed with a little distilled water, drained, and redissolved by boiling alcohol, deposits on the sides of the capsule on evaporation, the digitaline in a nipple-like granular form. Drained and dried, the digitaline ought still to be twice washed with boiling concentrated ether, which separates from it, among other substances, a white crystalline matter, and traces of green matter and of the odorous principle.

2*d. Physical and chemical characters.*—Digitaline, obtained and purified by the process which has just been described, presents itself in the form of a white, inodorous powder, and of an excessively bitter taste, which is especially experienced in the fauces; it is capable of causing violent sneezing when it is disseminated in very small particles in the air. Scarcely soluble in cold water; rather more so in boiling water: it is dissolved, in all proportions, in weak or concentrated alcohol. Pure ether only dissolves traces of it, but the slightest addition of alcohol considerably increases its solvent power. Completely deprived of either acid or alkaline reaction, digitaline is not susceptible of any combination with the acids or with the bases. Concentrated sulphuric acid dissolves it, colouring it with a deep hyacinth red; the solution, diluted with water, becomes green, and flakes are separated. Concentrated nitric acid changes it to a yellow colour, and dissolves it, depriving it of its bitterness. Hydrochloric acid colours it green. Ammonia and caustic soda colour it a yellow-brown. It does not contain any nitrogen.

3*d. Physiological and therapeutic properties.*—MM. Homolle and Quevenne have found its action on the dermis denuded by a blister so irritating as to forbid, they conceive, its endermic use. From experiments on their own persons, MM. H. and Q. have found the action of the digitaline on the heart to be always manifest,

and that it is commonly shown by a progressive diminution in the number of its pulsations, which have been lowered in some cases to 40, and generally to 50 or 55 in the minute. One of them could not take more than from four to six milligrammes (5-50ths to 6-50ths of a grain) in the four-and-twenty hours without the supervention of intolerance. This intolerance was evidenced by nausea, borborygmi, efforts at vomiting, then obstinate vomiting, continuing even after the digitaline has ceased to be exhibited. Inequality, irregularity and intolerance of the pulse, have often been observed after the digitaline has been given for eight or ten days. Its influence on the circulation appears to continue for several days after its exhibition has ceased.

The phenomena observed with respect to the digestive functions have consisted in an increase of the appetite, soon followed by a dragging sensation at the stomach; then arise borborygmi, abdominal pains with disengagement of the intestinal gas, and constipation, followed in some cases by diarrhœa. The diuretic action has been very irregular, and the renal function has been sometimes diminished for a short time. They observed, as the phenomena resulting from its action on the nervous centres, cephalalgia, giddiness, muscular weakness, soon followed by general prostrations, gaping, shivering, and sometimes an uncomfortable degree of heat in the hands and feet. Sleep has not appeared to be influenced by the digitaline.

Exhibited in a very serious case of anasarca, consecutive on an unfortunate confinement, and complicated with pericarditis and hematuria, the digitaline caused an enormous and immediate diuresis, accompanied by a considerable lowering of the pulse, which in forty-eight hours fell from 120 to 54 in a minute. The absorption of the infiltrated serosity was effected very rapidly, and the treatment proved successful. In two cases of pleurisy the diuretic action was evident, and the absorption of the affusion seemed to be hastened. In several cases of phthisis, digitaline diminished the frequency of the pulse and of the respiration, quieted the cough, increased the appetite, diminished the thirst, and arrested the diarrhœa. In cases of nervous palpitation, its action was variable, but often beneficial. In affections of the heart, with disease of the valves, causing a considerable disturbance in the hematosis and the circulation, with a feeble, tumultuous, unequal, irregular pulse, œdema, oppression, cough, and stasis of the venous blood, its action has always been useful. In two cases of acute affection of the heart—endocarditis with hypertrophy of the ventricles—it was injurious by increasing the impulse of the heart and the strength of its pulsations. Finally, in a case of pericarditis with effusion, it was evidently serviceable, by diminishing the frequency of the pulse and the oppression, by increasing the urinary secretion.

Digitaline is, in the first place, according to MM. H. and Q., a wonderful modifier of the central organ of circulation, regulating its disordered action, and bringing it back to the normal type, and nevertheless, singularly enough, disordering, by a prolonged administration or by excessive doses, that function which it renders irregular and intermittent.

MM. Bouchardat and Sandras have also instituted a number of experiments on digitaline, and it results from these experiments, they observe, "that digitaline is an *excessively active substance*, especially when it is pure. It acts with violence, not only when it is injected directly into the veins, but also when it is taken into stomach. It singularly modifies the circulation, and is capable of irritating the digestive organs in a high degree when it is applied to them. These experiments, then, having sufficiently enlightened us as to the energy of the principle extracted from the leaves of the digitalis purpurea, we were next desirous to ascertain the results that might be expected from so powerful a remedy when given in proper doses. It was, above all, important to obtain a correct knowledge of the action of this poison on the circulation, at the same time avoiding to excite the irritation which it is able to cause in the digestive apparatus. With this object in view we prepared pills, containing a tenth of a grain of digitaline, by means of mucilage and marshmallow powder. We exhibited these pills to patients in whom a greater slowness of circulation might be useful, and whose state did not allow us to fear any injurious results from the use of an agent capable of irritating the digestive canal. In these conditions we have observed

important modifications of the circulation. All our patients had a marked slowness of pulse. It was felt before the experiments were commenced; it was felt again five or six hours after the administration of one of the digitaline pills; and again the next morning. We found that the greatest depression of the pulse took place in general some hours after the exhibition of the medicine. It was then found in several instances to be diminished in frequency to the extent of nearly one-half the normal condition; it was, however, very often only one-third or one-fourth. The next morning it became rather more frequent, but it always remained from ten to more beats below the normal pulse. For example: in a young epileptic girl, whose pulse, habitually unequal, varied from 80 to 120, we have frequently found it only 50 in the minute under the influence of digitaline. A man, fifty years of age, who had been several times the subject of apoplexy, and whose pulse was never higher than 48, several times had it reduced to 36. A woman, fifty years of age, phthisical to the last degree, and often troubled with hæmoptysis, with a pulse generally from 120 to 131, has had it fall to 96 or 94. A woman, in whom we were desirous to increase the urinary secretion, had the pulse reduced for several days from 120 to 128 beats to 92, 88, or 85. In all these cases we found that the action of digitaline on the circulation was shown not only by a diminution of the frequency of the pulse, but also by its irregularity. This irregularity appeared to us to be of two kinds; the internal of the pulsations was unequal; this was the most remarkable irregularity; else the character of the pulse was altogether different, the pulsation being one while hard and very quick, at another hard and prolonged; it is sometimes soft at intervals, else it continually preserves that character. Almost all the cases which we have noticed have shown analogous results.

Only one of our patients mentioned any modification in the urinary secretion, and we were not able to attribute that fact to any other appreciable cause than the exhibition of the medicine. But, besides this physiological phenomenon, there were others, of which it is important to take note. Several patients have complained of disorders of the senses, light-headedness, annoying dreams, and hallucinations. These phenomena always occur at the commencement of the toxic effects of digitaline. They were soon followed by more or less frequently repeated diarrhœa or bilious vomiting. When this has occurred, we have, of course, always stopped the use of the medicine; but, in spite of all the precautions which could be adopted, the vomiting sometimes lasted for two or three days. The appetite was lost at the same time, and quietude and time were required to re-establish the digestive functions. The toxic effects of the digitaline were not generally produced at first; for the first two or three days it seemed as if the patient had not taken any thing out of the way; but suddenly, and without any previous warning, the effects of the ingested substance began to show themselves. The slowness of the pulse became then most marked. If its use be continued, the pulse becomes yet slower under its influence, but at the end of some hours it again becomes frequent, doubtlessly induced by the irritation of the digestive organs, which this singular body does not fail to produce.

*En resumé*, digitaline is one of the most active vegetable substances we are acquainted with. The attentive and sustained study of its effects on the circulation might furnish some useful indications for practice; but at present we believe it to be our duty rigorously to declare that it is an agent of exceeding energy, the action of which must be attentively supervised, its sudden toxic power being especially to be feared, notwithstanding the security in which the medical attendant is left for several days. Digitaline possesses exactly all the active properties of digitalis; this new substance may, therefore, be of service in all those diseases where digitalis has been employed with success, and the medical man may always know correctly the quantity of the active principle which he employs.

*4th. Dose and mode of administration of digitaline.*—The dose and mode of administration of this most energetic agent require the greatest circumspection. MM. Homolle and Quevenne from comparative essays have found that four milligrammes of digitaline correspond, in regard to energy of action, to about eight grains of the powder of digitalis purpurea, prepared with the greatest care, and taken in a state of purity.

*5th. Pharmaceutical preparations.*—MM. Homolle and Quevenne recommend

the following preparations as the most convenient forms for administering digitaline:—

*a. Granules of digitaline.*—One gramme of digitaline, fifty grammes of white sugar, for a thousand granules, which are to be prepared in the same manner as the aniseed of Verdun. These granules, containing each a milligramme (one-fiftieth of a grain) of digitaline, may be exhibited in the dose of from four to six in the course of the twenty-four hours.

*b. Syrup of digitaline.*—Two grains of digitaline, 1500 grammes of simple syrup. The digitaline is to be dissolved in alcohol, and then added to the syrup. This syrup contains one milligramme of digitaline in every fifteen grammes of syrup. Dose, from four to six spoonfuls in the course of the day, pure, or in a glassful of an appropriate infusion.

*c. Digitaline mixture.*—Five milligrammes of digitaline, 100 grammes of distilled lettuce water, twenty-five grammes of syrup of orange flowers. Dissolve the digitaline in a few drops of alcohol, and add the distilled water and the syrup. To be taken by spoonfuls in the four-and-twenty hours.—*Pharm. Med. Times*, April, 1845.

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14. *Valerianate of Quinine.*—Dr. Devay, in a memoir on this article in the *Gazette Médicale de Paris*, (19th Oct., 1844,) extols this salt as superior to the sulphate of quinine. The following is the mode of preparing it. To a concentrated alcoholic solution of quinine, valerianic acid in slight excess is added; the solution is diluted with twice its volume of distilled water and the whole well stirred, and then placed in a sand bath, the heat of which does not exceed 50° R. When the alcohol is evaporated, the valerianate of quinine presents itself in beautiful crystals, and which increase from day to day.

As this salt is easily decomposable, M. Devay gives it in the most simple form, generally in a solution of gum Arabic. The dose is from ten to forty centigrammes, nearly from two to seven and a half grains, during the apyrexia.

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## MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

15. *On the minute structure of the Lungs and the formation of Pulmonary Tubercle; with some Observations on its detection by a microscopical examination of the sputa.* By George Rainey. (*Royal Med. & Chirurg. Soc.*, March 25, 1845.)—The author, in his prefatory remarks, observes that it is not his intention to introduce any new speculations on the structure, functions, and pathology of the lungs, but only to bring forward such facts as readily admit of verification by the microscope, and to deduce from them what he considers obvious and legitimate inferences.

He divides his subject into four parts: 1st, the anatomy of the lungs as applicable to their physiology; 2d, with reference to their pathology; 3d, the mode of formation of tubercle; and lastly, its detection by a microscopic examination of the sputa.

The first division contains a general description of the lungs of the reptile, showing the alterations they undergo as they approach in complexity the same organs in the mammal. The principal difference between the lungs of reptiles and mammals is the existence of a double layer of vessels between contiguous air cells in the former, and only a single one in the latter.

The author showed that a great difference of vascularity exists in the different parts of the same lung, those parts being least vascular which are furthest from the principal air tubes; consequently, the quantity of blood requiring the influence of the inspired air is adapted to the diminution of oxygen in the remote cells; in which he considers the renovation of their contents is due more to the law of diffusion than to mechanical dilatation and contraction of the chest.

The author describes minutely the manner in which the bronchial passages communicate with the air cells and with each other; the actual terminus of a bronchial passage being itself a cell at the surface of a lobule, or several cells connecting one bronchial passage with another. It is further shown that each

plexus of capillaries is situated in a fold of membrane forming the immediate wall of the air cells; hence the author infers there must be cellular tissue in the lungs connecting these folds of membrane together.

He combats the opinion of Mr. Addison with respect to the non-existence of air cells in the fœtal lung, and shows by microscopic preparations that this opinion must be erroneous. He is inclined to deny the existence of muscular structure in the minute bronchial tubes, both from the absence of any thing like muscular fibre in the pulmonary membrane, and also from the fact that the connection of the bronchi with the cells appears to be such as not to admit of any constriction of these passages, even were muscular fibre present.

A description is next given of the manner in which tubercle is formed by the deposit of tubercular matter in the air cells, occasioning by its pressure absorption of the intervening capillary plexuses, the membrane still remaining. The author remarks that the vessels close to a tubercle, and even those of the cells in which the deposit is not sufficient to cause their obstruction, retain perfectly their natural character, while those near to the cells filled with fibrin from inflammation have a tortuous and knotted appearance; hence he thinks the deposit is not the result of inflammation, but merely an altered secretion. The observations on the formation of tubercle are confined to those of which the author has had the best opportunities of examining. He considers that it is only in preparations of the injected lung that the exact extent and situation of tubercular matter can with certainty be ascertained: he offers no opinion respecting miliary tubercle, having only once examined it; but the facts respecting the formation of common tubercle the author considers are unconnected with the consideration of any other form of phthisis, inasmuch as his preparations exhibit the tubercular deposit in all the different stages of common tubercle, from a quantity so small as to fill only a small part of a cell, up to that filling one, two, or even an indefinite number of cells: in all these preparations the tubercular deposit exhibits the same microscopic character.

Lastly, (from the fact that the pulmonary membrane does not become absorbed) the author proposes a method of detecting tubercular matter by a microscopic examination of the sputa. Although the observations he has made are not sufficient to enable him to speak with confidence of the practicability of this mode of diagnosis, in one instance he succeeded in detecting the pulmonary membrane in tubercular matter washed from the trachea of a phthisical patient, with perfect ease and certainty.

Dr. C. J. B. Williams could not assent to the portion of Mr. Rainey's paper on the pathology of the lung, especially in reference to the surface of the air cells being the primary seat of the deposition of tubercle. To discover this seat in so fine an organ as the lung it was necessary to investigate a number of cases of the deposition of tubercle in its very early stage, before it had accumulated and made its way through the epithelium to the free surface of the cells. Mr. Rainey, however, acknowledged that he had examined one specimen only of miliary or incipient tubercle. On the contrary, Mr. Gulliver had unequivocally detected the opaque granular matter of tubercle in many cases in the walls of the cells, and, indeed, the plexus of vessels itself. Some of Mr. Addison's remarks were to the same effect, but he, like Mr. Rainey, had conceived the idea that tubercle was essentially altered epithelium. That tubercular matter, however, was not an altered condition of the mucous membranes was proved sufficiently by the circumstance that tubercles were found in the parenchymatous structure of organs that were without mucous membrane; such, for instance, as the spleen, the brain, in serous membranes, and in blood-vessels. He believed that the nature and origin of tubercle might be easily explained in another manner. Mr. Rainey, in his observations on the obliteration of the blood-vessels of the lung by tuberculous deposit, had been forestalled by several physiologists, particularly by M. Nalatis Guillot, whose researches proved that the obliterated vessels were often compensated by anastomosing vessels, not only in the remaining healthy texture of the lung, but also in the pleura, and even in the outer wall of the chest itself through adhesions to the costal pleura. This fact clearly explained how it was that a few leeches, or a blister applied to the walls of the chest, often afforded such great relief in phthisis. He (Dr. W.) was surprised that the author had thought it

necessary to make any observations with the view of disproving the muscularity of the pulmonary texture, the non-existence of which had been sufficiently established by his (Dr. W.'s) researches and experiments. These experiments had shown that galvanism produced no contraction in the vesicular part of the lungs, although the contractions of this agent were most evident in the bronchial tubes. He thought little of Mr. Rainey's microscopic test of the sputa. This test could only be applied during the latter stage of the disease, and after many other unequivocal signs had decided the true nature of the disease.

Dr. Golding Bird remarked, that Mr. Rainey appeared to have arrived at the conclusion that the lining membrane of the air cells was truly a mucous membrane. Its pathology, however, would not seem to warrant such a conclusion. A mucous membrane during inflammation secreted mucus destitute of pus or coagulable albumen; but the lining membrane of the air cells, in common pneumonia, poured out a quantity of albumen, and hence the scanty yellow, or rust-coloured sputa of pneumonia, coagulated when heat was applied. In the condition of gray hepatization, also, occasionally, in persons of weak power, left long after the subsidence of the acute stage, the cells were full of a substance resembling in every particular coagulated albumen. Hence, although anatomically the lining membrane of the air cells could not be considered a serous membrane, its pathology, he believed, approached more nearly to such a structure than to a mucous membrane. He agreed in the remark of Dr. Hodgkin that it was almost impossible to discriminate between the deposit in the air cells resulting from pneumonia, and the so-called tubercle. The microscopic test of the sputa, mentioned by Mr. Rainey, was not a novel one, and even the presence of portions of air cell in the expectorated matter had been pointed out some time since by Dr. Buhlman, of Berne, a pupil of Professor Valentin. He had, in his Thesis on the Microscopical Structure of Expectorated Matter, figured broken air cells as found in the sputa of a phthisical patient, mixed with flakes of cholesterine.—*Lond. Med. Gaz.*, April, 1845.

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16. *Amnesia following a blow on the head.*—Dr. Patze relates, in No. 30 of *Casper's Wochenschrift*, 1844, a case of amnesia in a man 25 years of age, who had been knocked down shortly before Dr. P. saw him, by an oaken plank, eight feet long and three feet thick, which had fallen from a height of eighteen feet upon his head. On examining the skull, which Dr. P. did with great difficulty, in consequence of the patient's opposition, he "found a depression 2½ inches long, by 1½ inch broad, and $\frac{2}{12}$ths of an inch deep, in the situation of the anterior and superior angle of the right parietal bone. There was no other external injury. The look of the patient was furious, his eyes rolled in his head, and he frequently gnashed his teeth; on his face evidences of bleeding from the nose were apparent; nothing else unusual. The pulse was small, depressed, and so slow that it scarcely beat 60 strokes in a minute. To questions the patient only answered by nodding or shaking his head, and by gestures pointing to his tongue, his neck, and his windpipe, that he had lost the power of speech. His walk was so insecure that he had to support himself by the furniture in the room. He resolutely opposed my preparations to bleed him, drew the form of a leech upon the table with his finger, held up four fingers to indicate the number four, and pointing to the wounded head, indicated that he wished to have them applied there. It cost me great trouble to make him comprehend the greater usefulness of venesection in such circumstances. He made me understand by signs that I should take no more blood from him than a single cupful; when this quantity had flowed, he became impatient, and insisted upon having the arm bound up; I, on my part, wishing to get away a larger quantity of blood, felt the pulse, and used other pretexts to let a larger quantity flow; the by-standers also came to the patient's assistance, and insisted upon my tying up his arm. In my disputes, first with the patient and then with his friends, from twelve to sixteen ounces of blood might have flowed, when the patient suddenly exclaimed "now tie up my arm." This excited great astonishment among the spectators, and I was compelled to yield to his desire, although the frequency and the fullness which the pulse now showed would have led me to leave the vein open for some time longer. The arm was tied up, and the patient put to bed, having a poultice of cold vinegar and water

applied to the part injured, and an aperient mixture of arnica flowers, senna leaves, and sulphate of magnesia, prescribed for him every hour, until free discharges from the bowels should follow. In the evening the bowels had been moved twice; the pulse was free and large, and of proper frequency; the patient only complained of some lassitude, but the speech was slow and halted when he got at all excited. He had some sleep in the day; the wounded part was hot and moderately painful. Next day the patient was up,—I found him standing by the stove making his poultice. He now questioned the fact of any depression of the skull—he was only aware of some swelling—and showed great disposition to go to work. On the 15th, indeed, in spite of all my dissuasions, he went to work, and has continued very well ever since, although he cannot now get a few feet above the surface of the ground without feeling giddy. By and by he discovered that the skull was actually depressed in the situation indicated.

"He says that he felt himself knocked down by the falling plank, but that he immediately rose again possessed of complete consciousness, and had gone on about five paces, when he fell a second time senseless, nor did he recover himself again until he found himself at home. His anger had been excited by feeling himself without the power of speaking, and the disposition in the by-standers to treat him like a madman: he had a feeling of constriction and stiffness, which extended over the lower jaw, the tongue, and the neck down to the breast; the tongue appeared to have become motionless by its weight and thickness, so that speech would not follow the strongest behests of the will.

"This feeling had gradually become less and less during the blood-letting, and with its entire removal he found that he had recovered his power of articulating." *Lond. Med. Gaz.*, Nov., 1844.

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17. *Prolonged Sleep occurring at intervals.*—Prof. D'Outrepont records, in the *Neue Zeitschrift fur Geburtskunde*, (1844,) the following remarkable case.

A woman, 35 years of age, married, and the mother of four children, has been subject, since her marriage, to protracted sleep, which continues from two to seven days, commonly five days and a half, and recurs at irregular intervals. It comes on suddenly, without any precursory symptoms, sometimes at night, at others in the day. The patient awakes partially every twenty-four hours, with a dry mouth, thrusts her tongue out, drinks are then given her, which she swallows unconsciously, and immediately relapses into sleep. The intervals between these prolonged sleeps are from two to twenty days; she does not sleep at all, or has very short, agitated naps. The season and temperature of the air have no effect upon her condition. Menstruation, pregnancy, labour, the lochia, &c., are not disturbed by these sleeps, which is any thing but refreshing, the patient awaking fatigued. She passes neither urine nor fæces during her sleep, nor does she experience a want to do so immediately afterwards. She always awakes spontaneously, and cannot be awakened by any irritation. When her eyelids are separated the balls are found rolled upwards; the pupils do not contract by the sudden exposure to light. Respiration, circulation, and the temperature of the skin are in a normal state both when she is asleep and at other times.—*Gaz. Méd. de Paris*, Jan. 4, 1845.

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18. *On the Use of Sulphate of Manganese in various diseases.* By R. H. Goolden, M. D. (*London Medical Gazette*, Feb. 1845.) In our last No., p. 472, we noticed the suggestions of Mr. Ure relative to the administration of sulphate of manganese in gouty habits. Dr. Goolden states, as the result of his experience with this salt, that "when taken upon an empty stomach, in doses of one or two drachms, it has invariably produced vomiting in less than three hours, and generally within an hour; and the matter vomited has consisted of a very large quantity of yellow bile. After a meal, the same effect has taken place, but not invariably.

"It very rarely acts as a purgative alone, and after it has been exhibited for several days, I have often been obliged to have recourse to other purgative medicines, in consequence of the want of action of the bowels. After the first dose it seldom acts as an emetic. The appetite has invariably increased during its exhibition, and when the first emetic effect has subsided the patient is free from all uneasy sensations, and expresses himself as feeling lighter and easier than before.

"It sometimes leaves a bitter taste in the mouth, which is all that is complained of until the patient vomits.

"The stools, which are sometimes dark-coloured, soon become yellow and loaded with healthy bile; but if its use be continued for four or five days, they become lighter, and at length show a total absence of bile, appearing like jaundiced stools, of the colour of parchment, but there is no jaundice either in the skin or urine.

"If the medicine be discontinued, the yellow colour of the stools returns.

"In one case which was admitted into the Dreadnought with jaundice, and which subsequently died from inflammation of the spleen, with tubercular deposit in that organ, the jaundice very much subsided under the use of the medicine. The liver was healthy, but paler than natural; the gall-bladder quite empty, and the spleen very much enlarged, softened, and loaded with huge masses of tubercles."

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19. *Great Hypertrophy of the Heart and open Foramen Ovale, without Cyanosis.*—(*Dublin Journal*, 1844.) The subject of this case was a child aged four months and fifteen days. No appearance of disease manifested itself until two weeks after birth, when restlessness on lying down, particularly at night, and on the *right* side, occurred, which was relieved by turning the child over on the *left** side, or raising it to a sitting posture. This continued slightly increasing, the general health in other respects good, until within five days of its death, when severe symptoms of catarrh, accompanied with some difficulty of breathing, supervened and terminated fatally. The *post mortem* exhibited no discoloration of the skin; the heart was very much enlarged, but the auricles disproportionately small to the ventricles, the foramen ovale entirely open, so that the little finger passed through it easily; the left lung was of a chocolate colour, very much contracted, lying along the spine.

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20. *On the Nature and Seat of Hooping Cough.* Mr. J. S. Streeter, one of the Presidents of the Physical Society of Guy's Hospital, in an interesting paper on the nature and seat of hooping cough, read before the Physical Society of Guy's Hospital, advocates the views of Dr. Blaud, respecting the nature of that disease.

"Dr. Blaud," Mr. S. observes, "considers the primary cause of the disease to consist in an irritation, not an inflammation, of the mucous membrane of the bronchi, under which the glands and follicles of that membrane pour forth a specific secretion saturated with hydrochlorate of soda, the irritation of which, when it reaches the upper part of the treachea and larynx, throws the muscles of the glottis and of respiration into spasmodic action for its expulsion, in a manner exactly similar to any foreign body which accidentally enters the larynx.

"From this theory of the nature and seat of the disease I so far differ as to regard the primary affection of the bronchial membrane as inflammatory in its nature, and believe that it will be found on careful observation to be attended by more or less fever of an analogous character to that which attends contagious catarrh or influenza; but to that part which views the presence of a saline secretion in the trachea as the proximate cause of the convulsive cough which ushers in the second stage, I give my unqualified assent; because I believe it demonstrably true. When, however, the convulsive hooping is fully established, it very commonly happens that symptoms which mark the third, or what may be appropriately termed the complicated stage, are developed, and continue to mark the varying and formidable phases of the disease which mostly attract attention in practice. These tertiary phenomena usually manifest themselves—1st, as special lesions of the nervous and muscular systems; 2dly, as special lesions of the respiratory organs; or 3dly, as the more general affections of fever and cachexia, and are present in individual cases in every conceivable variety of combination.

"The 1st class comprise—an exalted sensibility, and morbidly susceptible state,

* It may be remarked that this case does not lend any support to the theory of Prof. Meigs, according to which the patient should be relieved by lying on the *right* side when the foramen ovale is open.

of the membrane of the larynx, the pharynx, the epiglottis, under which death from asphyxia may suddenly occur—morbid association of the action of the muscles of glottis and respiration, in consequence of which the cough continues from mere habit, or is reproduced by the most trivial irritation of the air passages; reflex irritation, often passing into inflammation of the nervous centres of the pneumogastric nerves, involving those of the phrenic nerves also; and finally, these reflex affections may extend to the whole of the brain, or to the medulla oblongata and their meninges, and prove fatal by inducing general convulsions or hydrocephalus. All these, be it observed, are pathological conditions of the nervous system which have been so constantly put forward in high relief by the advocates of the nervous theory as proximate causes of the disease itself.

"The 2d class of tertiary phenomena include the various congestive and inflammatory affections that result from the mechanical disturbance of respiration and circulation, and the extension of the primary bronchial inflammation to the trachea, larynx, and pharynx, and the tissues of the lungs themselves. Epistaxis, hæmoptysis, and fatal emphysema from extensive rupture of the air-cells, have occurred within my own experience, and have apparently resulted from the mechanical violence of the cough acting upon tissues previously weakened by disease.

"Of the 3d class I have only to observe, that in the absence of cerebral or pulmonary inflammation, the fever of the third stages is always asthenic, and often assumes a remittent type when the cachexia is of a marasmic character.

"The evidences of the truth of this theory, upon which I place reliance, are—the testimony of adults, who have been attacked by the disease, to the unusual and excessively saline taste of the expectoration so long as the paroxysms are severe—the resemblance of the expiratory efforts in hooping-cough to those made by the excito-motory system, for the expulsion of a foreign body from the larynx; the very adequate explanation it affords both of the extraordinary and spasmodic muscular actions which accompany the cough, and of its occurrence in paroxysms after intervals of uncertain duration; and lastly, the key which it furnishes to the chaotic host of apparently opposite remedies that have obtained professional or popular reputation in its treatment.

"Of these remedies, we find one group adapted to lessen the original bronchial affection, and favour the expulsion of the offending mucus—as emetics, antimonials, and counter-irritants applied over the chest; another, which acts by altering the quality of the secretion, as the alkaline carbonates, ammonia, and the sulphuret of potass, so strongly recommended by Dr. Blaud himself; another, by exciting a new action in the bronchial membrane; and constringing the vessels, put a stop to the secretion in a manner perfectly familiar to the physician in chronic bronchitis, and to the surgeon in purulent ophthalmia—the superacetate of lead, alum, common resin, T. cantharides in Bals. Copaibæ, tar vapour, and even the inhalation of nitrous vapour, &c. Others, again, as musk, both native and artificial, camphor, arsenic, conium, belladonna, opium, and hydrocyanic acid, are more especially adapted for the nervous lesions; and antiphlogistic measures meet the inflammatory lesions of the third or complicated stage."

These views were opposed by Dr. Golding Bird, Dr. Gull, Dr. Munk, and Dr. Barlow, and supported by Mr. Blenkarne, and the author of the paper. In the absence of chemical demonstration, Dr. Bird held that no reliance could be placed on the fallacious test of taste brought forward to prove the existence of a saline secretion, and supported the theory of Desruelles, which views the disease as at first inflammatory, and afterwards spasmodic, by a reference to its pathology and symptoms. He contended that alkalies are serviceable, by rendering the mucus more soluble and easy of expectoration, and not by changing its irritating quality. Dr. Munk and Dr. Barlow believed the true proximate cause of the disease to be a contagious miasm; the former considered it a true blood disease, and the paroxysm as essentially referable to spasm. Mr. Blenkarne thought the views advanced worthy of great consideration, as they afforded something like intelligible grounds for the employment of remedies.—*Lond. Med. Gaz.*, Nov., 1844.

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21. *Compression of the Carotids in Cephalalgia.*—This means formerly recommended by M. Blaud, has been employed with success by Dr. Dechang, in

several cases. Some of these are recorded by him in the *Annales de la Soc. de Med. d'Anvers*, for May last.

22. *Unusual form of Intussusception of the Colon.*—Dr. Harrison communicated to the Surgical Society of Ireland, (Feb. 15, 1845,) the following case. The patient, when first seen by Dr. H., was much emaciated, and with a countenance expressive of great suffering and distress, such as is observed in internal malignant disease. Vomiting was so incessant that the patient could hardly speak. On examination, a tumour about the size of an orange was found near the umbilicus, between it and the ribs of the left side; it could be moved up and down, and was free from pain at times, except on pressure. Dr. H. was much in doubt about the nature of this tumour, but formed a conjecture that it was a malignant growth from the omentum between the colon and stomach. He saw that it could not be an aneurism, and its situation was too low to induce him to suppose the disease was connected with either the liver, spleen, or stomach. He would not enter into a detail of the various remedies employed, all of which completely failed to give the slightest relief. The poor man was at times very free from suffering, but at others he would scream out and say—"Kill me, or cut me open!" The only medicine that at all benefited him was opium, which he continued to take till his death. On examination of the abdomen after death, very little appearance of disease presented itself at first. There was no general inflammation of the peritoneum or of the omentum; but on raising up the latter structure, and examining the colon, an intussusception of this intestine was seen to have taken place, the descending portion of it being carried up to the transverse arch, probably for an extent of three or four inches. The transverse arch being laid open, Dr. Harrison exhibited the lower portion of intestine lying in the upper, with its orifice resembling an os uteri, projecting into a dilated vagina; this contracted appearance of the orifice might, he thought, in some degree, account for the violence of the pain that had been suffered. The intussuscepted portion of the intestine was found in an ulcerated condition, accounting for the unhealthy discharge that had existed during life. Here was a very remarkable form of intussusception totally unlike those usually seen. When Hunter, in speaking of the affection, observes that such an occurrence is possible, he talks of the two species of the disease—the one progressive, in which the invagination may go on increasing from above downwards—the other, the retrograde form, the lower portion of the tube being received into the upper, as in the case under consideration; however, he gives no example of this occurrence. Sir Everard Home mentions one case of the retrograde species in the small intestines—a point in which the present case possessed additional interest, for the intussusception was here situated in the colon, while the small intestines or the cœcum are the parts usually involved. Cruveilhier had never met with this form of the disease, and gives no plate representing the affection. Various opinions respecting the nature of the case were entertained, not one who saw it having diagnosed it, except indeed Dr. Law, who, when he first examined the patient, at once observed that he knew of nothing it resembled so strongly as intussusception. For himself, he must confess he had not for a moment formed such an opinion. No remedy is known for the disease; the boasted one of the ancients—metallic mercury—being found to be as inefficacious as the rest; purgatives given by the mouth can effect nothing; Hunter says they generally do more harm than good; he conceives that violent vomiting might reverse the peristaltic action, but he (Dr. Harrison) believed very little reliance could be placed on any aid of a mechanical nature. With the exhibition of opium and perfect quiet, it might be hoped that an adhesion would take place between the opposed serous surfaces of the intestine and the internal cylinder, by this means gradually discharged by the anus; for many cases have been observed in which so many as two or three feet of intestine had come away. The present case, in which no hope of a favourable issue could be at all calculated on, might (had a diagnosis of its true nature been made) have been a good one for the lumbar operation. Had an opening been made in the right lumbar colon, a little above the cœcum, it might reasonably be expected that he would have survived. With regard to the operation of opening the colon in the lumbar region, it appeared to him, judging anatomically, that the right ought to be chosen in prefer-

ence to the left portion of it, which latter was the one hitherto selected. The right division would be found to be least covered by peritoneum, and to have much less mesocolon, and on making examinations of both portions he had found the right colon generally deficient of peritoneum on its posterior aspect. He thought this case would be interesting to the society for many reasons—the length of time the patient had endured it, upwards of two months, it being an instance of the retrograde species, the impossibility of diagnosing it, and its relation to the very interesting subject lately under discussion.—*Dub. Med. Press*, March 5, 1845.

23. *Observations on the Mechanism and Diagnostic value of the Friction Vibrations perceived by the Ear and by the Touch in Peritonitis.—The London and Edinburgh Monthly Journal* for May last, contains an interesting paper on this subject by Dr. Robt. Spittal. The author conceives that the following conclusions may be drawn from the observations thus far made:

That the mechanism by which the friction vibrations are produced is of three kinds, viz.

1. The respiratory movements,—of the diaphragm chiefly,—but also the action of the abdominal muscles. The vibrations being synchronous with these movements, though sometimes only developed during inspiration.

2. Artificial movement of the parts by pressure with the hand or otherwise. The vibrations corresponding in their rhythm to the movement produced.

3. The peristaltic motion of the intestinal canal,—imparting to the vibrations a peculiar, continued rustling, and creeping character to the ear and hand, corresponding to the vermicular motion of the intestines.

That the immediate cause of the friction vibrations is the rubbing together of two peritoneal surfaces, physically altered by the inflammatory process; and although the effusion of lymph has been considered necessary for their production, it appears highly probable that at a prior stage of the inflammation, when the peritoneum is merely drier than usual, friction vibrations may take place.

That the more the surfaces are moistened, the less intense will be the friction vibrations; and when a liquid effusion is sufficient to separate the surfaces, the vibrations will cease altogether at the part; but by altering the position of the patient, so as to enable the liquid to gravitate to some other part, and thus bring the surfaces together again, the friction vibrations will be renewed.

That the amount of motion between the inflamed surfaces, necessary for the production of the friction vibration, is very limited; and that different modes of friction, as to rapidity and degrees of pressure, may not only modify the intensity, but also the tone and quality of the vibrations.

That the present state of our knowledge does not permit us to connect any particular species of vibration with a certain physical condition of the peritoneum, although reasonable grounds exist for this expectation.

That although the friction vibrations are no evidence of the existence of adhesions between the peritoneal surfaces, it has not been proved, that in the case of partial adhesions,—and even when the adhesions are general, provided the effused lymph be recent, soft, and extensible,—an amount of motion sufficient to produce the friction vibrations might not occur.

That the respiratory abdominal friction vibrations are chiefly manifested at the upper part of the abdominal cavity, where its more solid contents are situated, and in the case of a large organic tumour,—and may be regarded as indicative of the inflammation existing over a solid organ or tumour.

That the indications from artificial movement of the parts have been perceived, both where tumours were present, and where the intestines alone, or along with the omentum, were the site of the inflammation.

That the peristaltic friction vibrations indicate that the peritoneum investing the corresponding portion of the intestinal tube is the part affected.

That wherever the peristaltic vibrations are *very distinctly perceived*, they may be regarded as indicative of a lively and free motion of the folds of intestine upon one another, and upon the parietes; and of few or no adhesions existing between them. At all events, it shows that the intestines are not generally adherent, nor matted together into an adherent mass, nor, to any great extent, adherent to the abdominal parietes.

That in cases of peritoneal inflammation in the upper portions of the abdomen simulating pleuritis, the presence of *any degree* of the peristaltic friction vibration might very much assist us in the diagnosis.

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24. *Sanguineous Apoplexy in a child eleven days old.*—A case of cerebral hemorrhage, a rare occurrence in very early life, is recorded by Dr. A. D. CAMPBELL in the *Northern Journal of Medicine* for Jan. last. The infant was a stout healthy male, and until the morning of the day on which he died, had shown no symptoms of disease. About seven A. M. he vomited frequently, and in an hour and a half afterwards was suddenly seized with violent convulsions, tossing about the head and limbs, rolling the eyes, and accompanying these movements with loud shrieks; in this state he was found by the gentleman who was requested to visit him. The pulse was at this time extremely rapid and hard, the pupils were contracted, the head hot; but the body and legs, especially the latter, felt cold to the touch, and attempts to vomit were occasionally made. The child was immediately placed in a warm bath, cloths dipped in cold water were applied to the head, and a powder composed of calomel and scammony exhibited. When the infant was removed from the bath, leeches were directed to be applied, and the other treatment usually employed in such cases was judiciously and energetically resorted to. In two hours thereafter a second powder similar to the first was given, as the bowels remained unmoved, and the symptoms continued unabated. At noon the child was again seen; it then appeared to suffer under all the symptoms of compression of the brain, precisely similar to those generally observed in the last stage of acute hydrocephalus; the convulsive movements of the limbs had subsided, it emitted occasionally a low moan, the pupils of both eyes were widely dilated, and the pulse was frequent, small, and feeble. A blister was now applied to the head, and two grains of calomel with five of jalap ordered to be given every second hour until the bowels were moved. In spite of the treatment, however, the child never showed the slightest signs of amendment, and died between six and seven the same evening, after an illness of rather less than twelve hours' duration. On examination of the body after death, its external appearance presented nothing unusual. On opening the cranium, and reflecting the dura mater from the circumference of each hemisphere towards the mesial line, I found the superficial vessels of the organ distended with blood; and on the surface of the middle lobe of the right hemisphere a small ecchymosed spot, of about three-eighths of an inch in diameter, situated under the arachnoid, which was quite transparent, and not clouded by any lymph effusion. On making a vertical section through this spot, I saw that it was the apex of a clot, nearly of the size and shape of half a small walnut shell, with the concavity directed upward. The blood was of the consistence and colour of thin currant jelly. The substance of the brain in contact with the clot was of an ochre colour, much softened, reduced in fact to pulp, to the depth of about an eighth of an inch all round. This pulp was examined with the microscope, and consisted of the tissue of the brain, numerous blood-globules, and fluid, but contained none of the corpuscles characteristic of inflammatory softening. The other parts of the brain when cut into were less firm than usual, especially in the affected hemisphere, which seemed as if infiltrated with colourless serum. The quantity of fluid in the ventricles was not greater than natural, and the brain exhibited no other abnormal appearance. The examination of the other cavities of the body was not permitted. On account of the unusual occurrence of the affection in so young a subject, the scalp, bones of the cranium, and external surface of the body, were again carefully inspected, but no mark of violence was discernible thereon.

From the microscopic examination of the softened tissue surrounding the clot, Dr. C. is inclined to regard its pulpy condition neither as resulting from previous inflammation, nor as arising from the irritation produced by the clot as a foreign body, but as caused by the effused blood having forced its way into and broken up the tissue immediately adjacent to the extravasation.

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25. *Treatment of Chronic Eczema.*—Mr. B. PHILLIPS states, in the *Lond. Med. Gaz.*, March 1845, that he has treated with signal success many cases of chronic eczema, by the following simple plan:

He purges the patient with calomel gr. v, jalap gr. xv, and two days afterwards repeats the purgative. He has the affected part bandaged, and the bandages wet with warm water, and covered with oil silk, so as to constitute a constant tepid bath. He also gives the liquor arsenicaliso minim v. twice a-day.

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26. *Ossified Gall-Bladder.*—Dr. S. S. Alison relates, in the *London Med. Gaz.*, Nov., 1844, an example of this, which he found in a female who had died of acute bronchitis of the left side. The patient had been singularly healthy throughout life, had never suffered any symptom of bilious diseases and was of temperate habits. With the exception of the gall-bladder, the contents of the pelvis and abdomen presented their natural characters. The gall bladder was white or grayish, resembling fresh putty, hard and resisting to the touch. It was distended with fluid bile: the cystic duct was obstructed with solid cholesterine. The outer coat of the gall bladder was greatly thickened, and contained much phosphate of lime. The gall bladder was very firmly attached to the liver. No signs of inflammation, either old or recent, were discovered in the bladder itself, or in the surrounding structures.

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27. *Report of the Committee of Vaccination, made to the Academy of Sciences of France, Feb.* 25th, 1845.—In 1840 the Academy of Sciences proposed the following questions as a subject for a prize essay:—

1. Is the preservative power of vaccination absolute or merely temporary? If it is temporary only, determine by accurate experiments and authentic facts, what is the period for which the vaccine matter exerts its protective influence against small-pox? 2. Has vaccine matter taken directly from the cow, a more certain and durable protecting power than vaccine matter transmitted a greater or lesser number of times through the human subject? 3. If the protective power of vaccine matter becomes enfeebled, should it be renewed. and if so, how? 4. Is it necessary to vaccinate the same individual several times, and if so, after how many years should the vaccination be repeated? The part of the report now read relates to the two first questions only.

The protecting power of vaccination being definitely established, the question arises—Is it possible, after forty-five years' experience, to determine the limits of that power? The answer to this question is difficult in the extreme, as it embraces inquiries not in France alone, but throughout the whole world: in fact, a general investigation of every case in which vaccination had been performed could alone supply the fundamental elements of the problem to be answered. The commission consequently announced in their report of 1840 that they did not expect the memoirs of the competitors for the prize to contain a general and definite answer, but a partial solution, only preparatory to that which time may perhaps ultimately afford.

The competitors for the prize have particularly examined how vaccinated persons are circumstanced during the prevalence of epidemic small-pox; in other words, what is the proportion of vaccinated persons in the entire number of those attacked with small-pox. The protective power of vaccination is by this mode of investigation reduced to a numerical question. An attentive examination of what occurred during thirty epidemics of small-pox in France shows two important facts—First, that somewhat more than one-third of the entire number of persons attacked with the small-pox had been vaccinated; secondly, that the mortality among the vaccinated persons was very small. According to the author of one of the memoirs, more than one-third of those attacked in the epidemics which occurred at Montbeillard had been vaccinated, but there was no corresponding increase in the amount of mortality amongst the vaccinated patients; and the same result was observed in the epidemic of 1828 at Marseilles. The same results follow from an examination of the epidemics that have occurred in England, Sweden, Denmark, Italy, Malta, Geneva, &c.

The fact, then, being established, that vaccinated persons can become affected with small-pox, and the proportion so attacked during epidemics being nearly determined, a most important problem remained to be solved—viz., what was the condition of the vaccinated persons affected as regarded the mere fact of their vaccination? The authors of all the memoirs agree in stating that vaccinated

persons were not affected indiscriminately, or by chance, as it were; on the contrary, the small-pox seems to make a kind of selection from amongst them. With some exceptions, the small-pox attacks those who have been vaccinated since a long period, and spares those who are recently so. An examination of the tables published in various parts of Europe, proves positively that children are seldom attacked with small-pox before the ninth year of vaccination, and also proves the converse fact, that it attacks in preference persons who had been vaccinated ten, fifteen, twenty, thirty, or even thirty-five years previously.

A general fact, which might be anticipated from the history of eruptive complaints is, that after the age of thirty-five years, the aptitude of vaccinated persons to contract small-pox becomes so slight that it may be considered as having vanished. An investigation of the facts relative to the occurrence of small-pox in vaccinated persons lead to the three following conclusions:—

1st. The protective power of vaccination is absolute and general for the first five or six years, and even to the eleventh or twelfth year, to judge from the experiments on re-vaccination.

2d. After the foregoing period, a part, but a part only, of those vaccinated, again become liable, especially under the influence of an epidemic, to contract small-pox.

3d. The greater number of those vaccinated probably remain completely protected from small-pox during their entire life.

Has the cow-pox, taken directly from the cow, a more certain and permanent protective power, than vaccine matter that has been transmitted more or less frequently through the human system? The experiments contained in several of the memoirs confirm the observations made by the Committee of Vaccination at Paris. The greater intensity of new vaccine matter, as compared with that long in use, is a fact definitely established by experience in England, Germany, Italy, and France. But is this greater intensity coupled with a greater preservative power? or, as the report puts the question—Is there any relation between the lesser or greater intensity of the local phenomena and the protective power of the variolous matter? The experiments made on this point show that the protective power of vaccine matter is not proportional to the intensity of the local symptoms, but that vaccination, with matter taken from the cow, is more certain than old vaccine matter. Admitting that the protective power of vaccine matter diminishes with time, should it be renewed, and if so, how? Has the greater or lesser intensity of the local phenomena of vaccination any relation to its preservative power? The diminution of power, according to the report, is undoubted.

As to the means of renewal, the first mode employed was the transmission of vaccine matter from man to the cow—an experiment frequently performed as a matter of curiosity, but only recently sought to be rendered a means of restoring to the vaccine matter its pristine lost energy. The authors of several of the memoirs maintain that the cow, when thus vaccinated, restores the vaccine matter unaltered, and therefore unregenerated, but the commission of the Academy think this conclusion too absolute: in fact, it has been established by the experiments of the author of one of the memoirs, that vaccine matter taken from man is regenerated during its transmission through the cow. The same fact results from thousands of experiments made in Bavaria under the direction of government. Vaccine matter thus regenerated, failed in less than 1 case per 100, while the failures of the old vaccine matter were nearly 3 per cent. Would it not be better to transmit the vaccine matter through several cows in succession than through one only? The mode, however, which should be preferred to all others—the only one on which we can entirely rely—is, as recommended by Jenner, to obtain vaccine matter from its original source. Several circumstances seem to show that the cow-pox is perhaps of less frequent occurrence than is commonly thought, and the commissioners suggest that those who happen to meet with it, should not content themselves, as has been hitherto done, with transmitting it to man, but should transmit it to other cows, and thus regenerate the infection.

Is it necessary to vaccinate the same person several times? and if so, after the lapse of how many years should the re-vaccination be performed? On this head the report first refers to the fact that the re-vaccinations, performed for a considerable period after the discovery of vaccination, did not succeed, except in some rare

cases, because they were performed too soon after the primary vaccination. But when at a later period experience showed that the protective power of vaccination diminished with time, the practice of re-vaccination was resumed, and then succeeded beyond expectation. In some parts of Germany, especially, re-vaccination was practised universally in the army, and even in civil life. Physicians also who had had small-pox in some instances re-vaccinated themselves, with success, of which Dr. Heim is a remarkable example. He attended on his brother for three weeks while he laboured under confluent small-pox, and three weeks after having gone through this decisive trial, he vaccinated himself, and had pustules almost of the ordinary size. M. Moreau, the celebrated accoucheur, who had small-pox in early life, re-vaccinated himself three times with success.

A document published by the government of Wurtemberg, which showed that of 1677 persons affected between 1831 and 1836 with small-pox, 1055 had been vaccinated, contributed greatly to extend the practice of re-vaccination in Germany and in the north of Europe. In France, the statistics of epidemic small-pox show that the number of vaccinated persons attacked with small-pox constitute more than a third of the whole number of patients affected. It is impossible, therefore, to doubt the propriety of practising re-vaccination. It is during epidemic small-pox, especially, that the utility of re-vaccination becomes obvious. Not only have individuals been thus protected, but the spread of the epidemic has been arrested.

In Prussia re-vaccination has been practised in the army since 1833, and the small-pox has been almost entirely extirpated. In Wirtemberg but one case of variola occurred in five years among 14,384 re-vaccinated soldiers, and 3 only among 29,864 re-vaccinated civilians. Epidemic small-pox has not appeared in France since 1830, the period when re-vaccination was commenced. The authors of the memoirs agree that during epidemics it is prudent to revaccinate about the eighth or ninth year. The answers given by the competitors for the prize to the questions proposed by the Academy, may be thus summed up:—

1st. The preservative power of vaccination is absolute for the majority, and temporary for a small number; and even in the latter it is absolute until adolescence.

2d. Small-pox rarely attacks those who have been vaccinated before the age of ten or twelve, from which age, until thirty or thirty-five, they are particularly liable to small-pox.

3d. In addition to its protective power, vaccination so modifies the animal economy that it attenuates the symptoms of small-pox, abridges its duration, and considerably diminishes its danger.

4th. Vaccine matter taken directly from the cow causes local symptoms of greater intensity; its effects are also more certain than those of old vaccine matter, but after being transmitted for a few weeks through the human subject, the local intensity disappears.

5th. The preservative power of vaccine matter does not seem to be intimately connected with the intensity of the symptoms of vaccination, nevertheless it is prudent to regenerate vaccine matter as frequently as possible, to preserve its protective power.

6th. The only mode of regenerating vaccine matter deserving of confidence is to procure it from the cow.

7th. Re-vaccination is the only known method of distinguishing those vaccinated persons that remain protected from those that do not.

8th. The success of re-vaccination is not a certain proof that the person in whom it succeeds was liable to contract small-pox; it merely establishes a tolerably strong presumption that they were more or less liable to be so.

9th. In ordinary periods re-vaccination should be practised after fourteen years, but sooner during an epidemic.—*Dub. Med. Press*, April 23, 1845.

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28. *Alum in Pertussis.* By Golding Bird, M. D. (*Guy's Hospital Reports*, April, 1845.)—Alum has enjoyed some repute as a specific in hooping cough. Dr. Bird who has prescribed this drug extensively during the last three years, states that in one stage of hooping-cough he had found it a most valuable remedy; but that like all reputed specifics, its administration will end in disappointing the hopes

of the prescriber, unless discrimination is used in selecting the proper stage for its exhibition.

In the second or nervous stage of the disease—after all the inflammatory symptoms have subsided; and when, with a tolerably cool skin and clean tongue, the little patient is left severely distressed by the more or less copious secretion of viscid mucus from the bronchi, each attempt to get rid of which, produces the exhausting and characteristic cough; the alum, he says, will be found of great value. He has not yet met with any other remedy which has acted so satisfactorily, or given such marked and often rapid relief to the child. He generally gives it in doses of from two to six grains in children from one to ten years of age, repeated every four or six hours. For a child of two or three years, Dr. B. employs generally the following formula:—℞. Aluminis gr. xxv; extr. conii gr. xij; syrup. rhœdos ʒij; aq. anethi ʒiij; M. Capiat coch., 1 med., 6tâ quaque horâ.

Dr. B. has never met with any inconvenient astringent effects on the bowels during the exhibition of this remedy; on the contrary, in more than one instance it produced, he says, diarrhœa. The only obvious effects resulting from its use were, diminished secretion of a less viscid mucus, with a marked diminution in the frequency and severity of the spasmodic paroxysms.

Dr. Bird has also administered alum in the broncorrhœa of patients affected with emphysematous lungs, and, in severe cases, with marked advantage.

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29. *Crystallized Nitrate of Silver in Diarrhœa of Children.* By Dr. Henoch.—According to Trousseau's proposal, nitrate of silver was employed in the polyclinic of Berlin, by Romberg, in cases of obstinate diarrhœa of children. The usual formula was: ℞. argent. nitr. crystal. gr. ½-j; solve in aq. destill. q. s. mucilag. rad. salep. unc. 2½, syr. diacod. unc. ½. A teaspoonful to be taken four times a day. The author details twelve cases of acute and chronic diarrhœa in children from nine months to twelve years of age, which were treated generally with complete success; and without any subsequent injurious consequences. Even when the symptoms indicated the presence of tuberculosis intestinalis, the nitrate of silver displayed an equally good effect. The remedy does not seem to have been used at all in the form of enema.—*Med. Times*, May 24, 1845, from *Journal fur Kinder krankheiten.*

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## SURGERY.

30. *Irrigations with Cold Water in the treatment of severe Traumatic Lesions.*—Dr. Rognetta, in his very valuable *Annales de Therapeutique Medicale et Chirurgicale et de Toxicologie*, presents a monthly sketch of the most interesting cases observed in the hospitals of Paris, and the modes of practice there adopted with a view of exhibiting the existing state of surgery in that capital. We shall frequently enrich our journal from these sketches.

In the number of his Annals for October last, Dr. Rognetta informs us that irrigations with cold water in the treatment of severe traumatic injuries are at present in high favour in the Hospitals of Paris. Four patients in the Hospital Beaujon are at this moment treated in this manner, with the greatest advantage. One is a mechanic 50 years of age, who had his right hand crushed, ground to pieces, as it were, by the wheel of a carriage; the soft parts of the last four fingers were horribly mangled, gangrenous in several points, the sheaths of the tendons largely opened, the nails torn off; some of the phalanges exposed. It was precisely one of those cases for which lately amputation would have been directed of the forearm, a practice which many surgeons still follow, and they make great boast of employing, as their only dressing, poultices, with a few leeches. But fortunately, in consequence of the continual irrigation with cold water which the surgeon has employed day and night, over the whole hand, the inflammatory reaction has been moderated and limited; it has not spread farther than the fingers, the sloughs have separated, several of the tendons are in process of exfoliation, a healthy granulating surface is established, and nature labours admirably at reparation under this constant deluge of cold water. To day, the 12th from the

accident, the patient already moves his fingers, the wrist and the forearm are neither swollen nor stiff, nor painful, and every thing promises a speedy cure, with more or less stiffness in the four fingers, the thumb not having been injured. Another patient, a man 40 years old, had his right foot drawn under a locomotive, the bones and soft parts were reduced almost to a jelly; they thought, at first, only of cutting off the leg near the ankle; however, as the first row of tarsal bones, and the corresponding part of the skin were uninjured, M. Robert performed Chopart's amputation, using for the flaps all those portions of the soft parts which were uninjured. The superior flap was large enough, but the inferior met it only imperfectly. Two simple bandages held the parts loosely together, and by the aid of cold water, the dangers attending reaction were happily surmounted; a healthy granulating surface was formed, and in spite of some small sloughs appearing on the top of the flaps, this patient is doing perfectly well, and his cure is confidently expected; to day is about the 8th since the operation. Doubtless similar results are obtained frequently without the employment of the plan of which we are now treating, but it should be noted that patients experience exceeding relief from the cold water; they forget their pain, can sleep, have scarcely any fever, or those gastric disturbances which prevent them from taking nourishment, so conducive to a prompt recovery. Wounds, indeed, are cured with great rapidity under the influence of irrigations; from the fact, too, that inflammation is either prevented or subdued by cold, those purulent deposits, (fusées purulentes,) which are the despair of the art, and which compromise the result of the most brilliant operations, are not met with. The third patient is a man who fell upon the soles of the feet from a height of several yards. A fracture of the os calcis was the consequence, with enormous swelling of the whole foot and of the lower part of the leg, phlyctenæ and threatening gangrene. By the use of cold irrrigations these accidents were successfully combated, the inflammatory process was subdued, and to-day, the 8th of the accident, the patient is doing well; the remedy is kept up constantly, and if it is suspended for a very short time the patient suffers very much. The same phenomena occurred in a fourth patient, who, in falling, dislocated the phalanx of the thumb backwards, opening the joint on the palmar side. It was easily reduced, and precautions were taken by means of irrigations, against the severe consequences which were justly apprehended. Two other patients are now undergoing the same treatment in the three wards of the Hotel-Dieu, confided for the time, to M. Denonvilliers. One is a young woman, who, in consequence of a fall, fractured the body of the lower jaw, broke the neck of the femur, and crushed the left foot, opening at the same time the tibio-tarsal joint; irrigations were employed upon the latter part, the most serious injury, certainly, which the woman sustained, and reaction was kept within proper bounds: the other patient is a man who had two of his fingers torn off; he is getting well. We have mentioned elsewhere a case of fracture of the elbow, with a wound of the joint and removal of splinters of bone, happily treated in the same manner by M. Gerdy; and another of resection of the radius treated with equal success by M. Blandin.

At the Hotel-Dieu, irrigation is effected by means of a bucket with a spigot, suspended over the top of the bed; strips of linen attached to the spigot conduct the water in several streams without any shock directly upon the wound. At Beaujon, an ordinary bucket is used, with a syphon made of a gum-elastic tube, which dips into the bucket and furnishes a regulur stream of water, the stream being regulated by means of a cock in the tube itself. In both these hospitals warm or slightly tepid water is generally preferred to cold. However, the water which we saw used at Beaujon was cold, and we congratulate the surgeon thereon for as soon as the water becomes warm the true end of irrigation is more or less lost. Irrigation, in fact, acts only as a physical agent, in removing by its low temperature one of the most essential elements of inflammation—morbid heat. A vital, refrigerant, antiphlogistic action, results from it indirectly. But, if the liquid is warmed, it is evident that the morbid stimulus is but slightly lessened, and although some little good effect may be produced by the washing away of the pus and by diminishing the excess of caloric, the benefit is much less decided. M Denonvilliers and some other surgeons think that irrigations with cold water may give rise to tetanus or gangrene; this appears to us to be a mere prejudice;

it is easy to prove that the examples adduced to sustain it are not conclusive, these accidents being entirely independent of the use of cold water. It is very much to be desired that hospital surgeons should understand better the immense advantage which the art may derive from this powerful remedial application, and that the preconceived ideas which have hitherto excluded it from several of the clinics should give place to a more perfect knowledge of its action. According to the observations of M. Robert, cold irrigations are not found to be of real utility, excepting in the severe injuries of the smaller limbs, as the hand and foot. In the forearm the advantage will be still less, and in the thigh least of all. In the last mentioned part, as M. Marjolin has observed, the water renders the skin cold and pale, but in the deeper seated tissues the inflammatory process still goes on, which seems to show that the water has a mere superficial action. We refer the reader to the 1st vol. of the *Annales de Therapeutique*, p. 76, where this question is freely discussed.

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31. *Dressing of recent and old Wounds.*—This subject, Dr. ROGNETTA says, (*Annales de Therapeutique*, Oct., 1844,) has lately drawn some interesting observations from M. CHASSAIGNAC. This surgeon, who, at this time performs the duties of M. Gerdy at La Charité, has applied himself to generalizing the old custom of dressing wounds but seldom, but with an important modification which it behooves us to make known. The occasional dressings were nothing more than the common dressings, applied upon charpie and other pieces of linen, and changed seldom; the pus in contact with the wound was regarded as an emollient application, (which is an error,) and the dressing, whenever it was renewed, was found to be filthy, putrefied, and sometimes full of worms. M. Chassaignac has had two objects in view in his mode of dressing, which he calls *pansement par occlusion;* to insure the escape of all the pus as fast as it is secreted, and to preserve the surface of the wound from contact with the air, and from all other sources of irritation. For this purpose he surrounds and covers the wound completely with bandages covered with ointment, which he crosses in every direction, so as to form a kind of coat of mail; these bandages which compress the wound somewhat by forcing its circumference nearer to the centre, allow the pus to escape freely through their interstices, between their edges or even through their substance, for the ointments with which they are covered melt and leave nothing but a porous tissue. Upon these bandages "*d'occlusion*" are placed some coarse charpie, compresses and an ordinary bandage. Every day the linen and the charpie are changed, and the external surface of the bandages is carefully wiped. The bandages themselves are changed, and the wound is carefully washed every four, five, six days, more or less. This, it will be seen, is not really the occasional dressing, for the wound is dressed every day, always, however, shielded by the plaster, which renders it, so to speak, a subcutaneous wound. Under this kind of dressing, wounds acquire a healthy aspect; they granulate, assume a red colour, and proceed rapidly towards cicatrization. When the dressing is changed, all the edge is found blackened and soiled by the solution of the unctuous matter, and by the generation of a sulphate of lead, the action of which may possibly contribute to the subsidence of the inflammation, and consequently to the process of cicatrization; the beautiful appearance of the wound is not entirely perceptible until it has been well cleansed. At the Hotel-Dieu, M. Denonvilliers employs this dressing in some cases, and is very well satisfied with it. We may remark that Baynton's method of dressing ulcers agrees entirely with the plan advocated by M. Chassaignac; but the method is of very general applicability, for this surgeon employs it indiscriminately in all suppurating wounds, in lacerations, in contused wounds, and obtains more success than from the ordinary dressings, the cures being more prompt, etc. M. Chassaignac thinks that the daily dressing of wounds with lint acts upon them very much like an issue pea, which is the very opposite to the opinion entertained by the ancients, who recommended the application of dry charpie when they wished to promote vigorous granulation.

However this may be, we can aver from our own experience, that the dressing by occlusion is an excellent one. Ten patients are now treated in this way at La Charité. When the wound exists with separation of parts M. Chassaignac is in the habit of making in all the parts separated a number of punctures; this conduces

much to the cure. We may remark that the dressing employed by M. Velpeau in abscesses of the breast, with or without separation of parts, with or without fistulæ, may be classed under the same principle; he covers the breast with long strips of bandage which he crosses obliquely over the thorax, from the axilla or the shoulder, arranging them artistically in such a manner as seems indicated by the suppurating sinus, and in such a way as to favour the escape of the pus and the obliteration of the abscesses; sometimes this armour-like envelop has an aperture in it opposite to the discharging orifice, sometimes it is entire. The object which the surgeon has in view in these cases is compression, and it is plain that this is better effected in this manner than by the compresses and bandages recommended by Boyer. If both breasts are affected, two distinct dressings are used; a woman, who is now in the wards, is in just such a condition; one breast is compressed for an abscess already opened, and the other for a small phlegmon which threatens to form. In this last instance, compression is employed, we see, as an antiphlogistic agent.

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32. *Traumatic Tetanus successfully treated by amputation of the injured part, the application of cold to the spine and the internal use of Cannabis Indica.*—Prof. Miller, of Edinburgh, relates in the *London and Edinburgh Monthly Journ. Med. Sci.*, Jan., 1845, a very interesting case of this character. The subject of it was a girl seven years' of age, in whom tetanus supervened to a wound of the middle finger of the right hand, caused by the wheel of a cart passing over it. The disease first manifested itself thirty days after the accident. The finger never having promised well for a satisfactory recovery, Mr. M. determined on its immediate sacrifice, as soon as tetanic symptoms were fully declared, being well aware, that although in it resided the exciting cause of the formidable train of symptoms fast setting in, yet that removal of this could be expected to prove beneficial, only at a very early period of the case, ere the spinal cord had been all but irretrievably involved. Amputation was accordingly performed, with as little delay as possible, at the metatarso-digital articulation. Little pain was complained of; and blood flowed but sparingly. He abstained from deligation of any vessels; partly, because a moderate loss of blood might not be without its use, at this the commencement of the treatment; but chiefly, because he was anxious, by avoidance of the use of ligature, to leave the wound in as favourable a state as possible,—free from all source of further irritation. For a like reason, no stitches were employed; sufficient approximation being effected by tying the adjoining fingers together by a slip of bandage. Water dressing was applied to the wound; an enema, containing assafœtida and turpentine ordered; cold applied to the spine and the cannabis indica in doses of 20 drops every two hours; (the dose of this last subsequently was largely increased. Under this treatment the trismus, opisthotonos, and rigidity of the upper extremities, as well as of the abdominal muscles, at first very great, and which underwent cruel exacerbations on the slightest exciting cause, gradually gave way. Rigidity gradually relaxed; the exacerbations became less painful, less frequent, and less easily induced, and, finally, recovery took place.

1st. Prof. Miller conceives that there could be no doubt of the propriety of amputating the offending part in this case, as soon as the tetanic symptoms fairly manifested themselves. The comparative absence of pain and bleeding, during the incisions, was characteristic of the disease.

The nerves of the removed finger were examined by Mr. John Goodsir, and found imbedded in dense inflammatory exudation—themselves expanded in bulk, and presenting the appearance of considerably increased vascularity.

Were a similar case of injury to present itself, with like tendency to spasmodic flexion of the parts implicated, Prof. M. would be inclined to regard that symptom as ominously premonitory, and would feel called upon, by early amputation, to sacrifice the part, even though it might otherwise afford good prospect of its own recovery.

2d. The first prescription was a full dose of calomel and jalap, while the power of swallowing was yet comparatively free. It answered well, bringing away much fetid and dark-coloured matter from the bowels, as usually happens in such cases. Sufficient action was afterwards maintained by enemata, containing turpentine and tincture of assafetida.

During convalescence, a marked perversion of the intestinal secretions persisted, and was got rid of only by a corresponding continuance in the use of alterative aperients.

3d. Since the perusal of a case of hydrophobia, treated by Dr. Todd, of King's College, London, and published in the *Lancet*, No. 960, p. 583, Prof. M. has felt very hopeful of ice applied to the spine, as a remedial agent, not only in that disease, but more especially in tetanus. And he determined to make trial of it on the first opportunity. Its action is obviously sedative on the nervous system; powerfully and directly so. So soon as circumstances permitted, it was had recourse to in this case, and was maintained in constant, or almost constant operation for ten days; the bags of ice being laid along the whole spine, but with the chief effect directed on the upper part. Forewarned by the circumstances of Dr. Todd's case, he was prepared to use this remedy with much caution, aware that the sedative power might prove excessive, and might demand not only considerable intermission of the application, but a cotemporaneous use of general support, and perhaps of stimuli. He was surprised to find, however, that no occasion for either presented itself. The pulse kept low, certainly, and of but sparing strength, but not too much so. And the only complaint made of the application, by the patient, was the attributing to it the severe pain felt in the back, which was caused doubtless by the opisthotonos. When the symptoms had plainly begun to yield, the ice was discontinued; particularly as, about that time, tendency to free perspiration began to manifest itself.

Very shortly after discontinuance of the cold, two marked exacerbations occurred—at a time when these had greatly abated; but as there was no recurrence, he did not think it necessary to resume the application.

4th. The cannabis was begun in a very moderate dose, which was gradually increased, until about three grains of the resinous extract were taken every half-hour—a full dose for an adult, in ordinary circumstances, without repetition. A few doses usually induced sleep, with marked mitigation of the spasm; and on the patient's emerging from the state of narcotism, the remedy was resumed, and steadily continued until a similar result was obtained. The period of narcotism, and consequent intermission of the medicine, did not usually exceed two or three hours. The sleep was deep and unbroken, and seemed to be refreshing. It certainly was followed by no headache, or other apparent inconvenience. The eyelids were seldom, if ever, shut, as in ordinary sleep; but remained half open, disclosing the eyes, dull and upturned, and giving to the countenance a very peculiar expression. While the exhibition of the drug was at its maximum, great irritability and peevishness of temper were shown by the patient, during her waking moments; but it were, probably, unfair to attribute this to the medicine.

As the symptoms began to recede, the cannabis was proportionally diminished in dose. Ultimately, it was discontinued altogether, while yet a hardness of the abdominal muscles remained; it seeming, then, to meet with comparatively little tolerance in the system, and to induce a quick and irritable state of the circulation. Throughout the whole period of its use, its effect on the appetite was most obvious; but greatest, as was to be expected, during convalescence. The craving for food, of all kinds, was stated to be, at times, absolutely voracious.

The following are Prof. M.'s conclusions respecting the action of the cannabis:

"1st. It has the power—probably not slight—of controlling inordinate muscular spasm.

"2d. In tetanus there is a marked tolerance of the remedy; both as regards the safe exhibition of large doses, in frequent repetition, and the absence of such unpleasant consequences as the usual dose, in ordinary cases, is apt to induce.

"3d. With its antispasmodic virtue, *in appropriate cases*, it probably conjoins hypnotic and anodyne properties, though in a minor degree.

"4th. It has the effect of remarkably increasing the appetite; and digestion does not seem to be impaired. The dejections, though dark and offensive, contained no unchanged ingesta.

"5th. It does not induce constipation.

"6th. On recedence of the tetanic symptoms, the dose of the medicine should proportionally decrease. The tolerance is passing off, and if the original dose be continued, some of the untoward effects are not unlikely to occur."

5th. The fifth indication of cure was never lost sight of. From the first, very strong beef-tea was ordered to be always in readiness, and to be frequently administered. As the trismus yielded, and the power of swallowing was regained, ordinary food was offered in addition, and usually was taken with greediness.

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33. *Fungus of the Testicle.* By James Syme, Professor of Clinical Surgery, in the University, Edinburgh. (*Lond. and Edinb. Monthly Journ. Med. Sci.*, Jan., 1845.)—This disease was first described by Mr. Lawrence under the title of "A Peculiar Affection of the Testis, attended with the growth of a fungus from that organ," (*Edinb. Med. and Surg. Journ.*, 1808,) and he recommended the removal of the fungus by means of escharotics, ligature or the knife, instead of castration. This treatment was necessarily tedious and protracted.

Prof. Syme proposes a much more satisfactory mode of treatment, should further experience show it to be as successful as it has so far been in Mr. Syme's practice.

"When the fungus growth is divided longitudinally," Prof. Syme remarks. "that is, from the base towards the circumference, it may be seen to consist of two textures, distinguished by their colour and arrangement. One is brown and disposed in straight lines, radiating from the base, where they are nearly, or quite close together, towards the circumference, where they are more or less apart, according to the size of the excrescence. The other is white and granular, lying in the spaces which are afforded by the diverging rays. The former is composed of the tubuli seminiferi, altered in situation but not in structure, while the latter is simply organizable lymph that has been effused into the interstices. The relative proportion of these textures may be seen best by making successive sections of the fungus, parallel with its base. Here the substance of the testicle appears little if at all altered, and presents a mass of uniform brownish colour. But in proceeding towards the circumference, each slice shows more and more of the white interstitial substance, until it seems to be the sole constituent. In addition to these facts, which are within reach of the naked eye, Mr. John Goodsir detected in a fungus which I gave him for examination, by the microscope, that it was covered externally by a thin layer of substance possessing the characters of a granulating surface. So that the excrescence might be regarded as merely an extreme degree of exuberant granulation, or what, in vulgar language, is called 'proud flesh.'

"This observation suggested to me the idea, that by the use of proper means the fungus might be made to retrace its steps, through absorption of the white substance and gradual approximation of the brown, and that the granulating materials of the surface might thus be enabled to complete the healing process. Pressure was obviously the agent on which reliance should be chiefly placed for producing the effect desired with this view, and the most convenient mode of compressing the growth, seemed to be enclosing it within its proper covering of the scrotum. There is no loss of substance in this part, as the fungus issuing through a small ulcerated orifice, merely presses the integuments aside, so that they are found lying in loose folds above the dense ring that encircles the neck of the protruded mass. It must, therefore, be easy to obtain from this source, an abundant supply of materials for the purpose."

Prof. S. relates the two following cases, in which he successfully resorted to this mode of treatment:

Case I.—Andrew Ayton, aged 26, was admitted on the 8th of January last, on account of sores upon his legs, and a fungous excrescence from the testicle, about the size of a filbert. On the 15th, Prof. S. cut round the fungus, and extended the incision upwards as well as downwards, so as to give it an elliptical form. The integuments were then separated on each side, and brought over the growth, where they were retained by three stitches. The scrotum was supported by plasters and a bandage. It appeared at first as if union by the first intention had taken place completely; but part of the wound suppurated, without, however, showing the slightest disposition to protrude. The patient might have been allowed to go home soon after the operation, but was retained until the wound had fairly cicatrized, and left the hospital on the 9th of February.

As the fungus in this instance was of a small size, the following case, which exhibited the disease in its most formidable aspect, will probably be considered better evidence in favour of the treatment—though, Prof. S. believes the truth to be, that the obstacle to recovery is greater when the excrescence is small, than when it has attained a larger extent—since the tendency to protrusion must be stronger in the former condition than in the latter.

Case II.—William Smith, aged 38, was admitted on the 13th of October last, on account of a fungus of the testicle. It was attributed to the effects of a blow.

On the 15th, Prof. S. proceeded as in the former case, but of course found it necessary to make a much more extensive separation of the scrotal integuments, in order to obtain a covering for the fungus. Complete reduction having been effected, the edges of the wound were stitched together, and carefully supported by straps of adhesive plaster applied round the scrotum, which had been shaved to permit their employment. A T bandage was then put on to keep the parts more securely steady. No unpleasant symptom followed the operation, and at the end of a fortnight the cure might be nearly considered complete; and Prof. S. believes would have been so, if the thick and indurated margin of integuments surrounding the neck of the fungus had been cut away. But in the course of another week there could be no hesitation in regarding the patient as entirely well.

It was well said by an excellent surgical writer of the last century, that "a grain of matter of fact to a practical surgeon is worth a pound of reasoning," and I accordingly hope, that the results of these cases will outweigh the various speculative objections which have been, or may be, urged against the practice now proposed.

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34. *Compression in Aneurism.*—(*Dublin Medical Press*, March 19, 1845.) Compression has been employed in Great Britain, within the last three years, for the cure of aneurism, with a degree of success calculated to inspire much confidence in this mode of treatment. Dr. Bellingham communicated to the Surgical Society of Ireland, March 1st last, the following list of cases successfully treated by compression, since its introduction by Dr. Hutton in Nov., 1842. The cases are arranged as nearly as possible in the order of their occurrence:—

| | | |
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| 1. | Dr. Hutton, | case of Popliteal aneurism. |
| 2. | Dr. Cusack - - | Popliteal aneurism. |
| 3. | Dr. Bellingham, - | Popliteal aneurism. |
| 4. | Mr. Liston, - - | Femoral aneurism. |
| 5. | Dr. Harrison, - | Popliteal aneurism. |
| 6. | Mr. Liston, - - | Femoral aneurism. |
| 7. | Dr. Bellingham, - | Femoral aneurism. |
| 8. | Dr. Kirby, - - | Popliteal aneurism. |
| 9. | Dr. Allan, - - | Popliteal aneurism. |
| 10. | Mr. Greatrex, - | Popliteal aneurism. |
| 11. | Dr. Cusack, - - | Popliteal aneurism. |
| 12. | Dr. Porter, - - | Popliteal aneurism. |

Dr. Bellingham stated that he had "intended to have made some analysis of these cases, at least so far as the length of time which each patient had been under treatment, the amount of tolerance of compression, and the part of the vessel to which the pressure had been applied with least inconvenience to the patient, &c. &c.; but as full details of all the cases have not yet been published, I shall confine my observations to some other points connected with the application of pressure, and endeavour to answer some of the objections which have been urged against this mode of treatment.

"It will be observed, in the cases which have been published, that the femoral artery could be traced after the cure to near the sac of the aneurism, proving that the artery is never obliterated at the point compressed. But as upon a former occasion I endeavoured to show that such an amount of pressure as would obliterate the artery is never necessary, and that the cure would be more quickly and more certainly brought about by allowing a feeble current to pass through the sac of the aneurism, than by completely checking the circulation in the vessel, I shall

not dwell further upon it now. I may observe, however, that this principle appears to have been established by the cases which have occurred in this country since; indeed, in Mr. Cusack's case, communicated to the society at the last meeting, palpitation was complained of when pressure was carried so far as completely to interrupt the current through the artery; this I also noticed in the last case which I treated.

"It is deserving also of remark that in the cases which have been detailed in full, an enlargement of the articular arteries about the knee, coincided almost with the cessation of pulsation in the tumour. This increase in size of the anastomosing vessels, showing that the collateral circulation is becoming established, is obviously a very favourable sign; and if it occurs early during the treatment, we may look for a speedy cure, as it indicates the filling up of the aneurismal sac.

"The principal improvement which has taken place in the mode of treating aneurism by compression, since I last brought the subject before the Surgical Society, consists in the employment of two instruments along the course of the artery leading to the aneurismal sac; when the pressure becomes painful at one point this can be relaxed, the other having been first tightened; and by thus alternating the pressure, we are enabled to keep up continued compression for any length of time. By this means the principal obstacle in the way of the employment of pressure has been removed; the patient can apply it with comparatively little inconvenience to himself; time will not be lost, owing to the parts becoming painful or excoriated, from the pressure of the pad of the instrument, as sometimes has happened from carelessness in applying the compressor; and as the pressure need not be interrupted for any length of time, but may be continued for a great part of the twenty-four hours, the duration of the treatment will be necessarily considerably abridged.

"Some of the success of the improved method of applying pressure must, however, be referred to the improvement in the instrument used. That which I employed, (made by Mr. Milliken, of Grafton street,) and now upon the table, is a modification of a carpenter's clamp, which was invented by a patient under Dr. Harrison's care for popliteal aneurism, whom I had the opportunity of seeing several times, both while under treatment and after the cure had been completed. It consists of an arc of steel, at one extremity of which is an oblong padded splint, the other extremity terminates in a nut, containing a quick screw, to which a pad similar to that of the tourniquet is attached. The principle of this instrument is exceedingly simple, so much so that the patient can apply and remove it himself, and it can be made of any size, so as to compress any vessel within the reach of compression. It appears to be a much superior instrument to that which was employed in the cases treated in the London hospitals, the application of which cannot be maintained for any length of time without occasioning severe pain.

"Compression, in several instances, has obvious advantages over the ligature, independent of this proceeding being perfectly exempt from danger.

"Thus the manner in which pressure brings about the cure of aneurism, appears to be precisely that by which nature, under the most favourable circumstances, effects a spontaneous cure. The fibrin of the blood is entangled by the lining membrane of the aneurismal sac, successive depositions occur until the sac is completely filled, the tumour becomes solid, and all pulsation ceases: the sac no longer permitting the passage of blood through it, the collateral branches become enlarged, and the circulation is carried on by them. The tumour then gradually diminishes in size, owing to the absorption of its contents, and the gradual contraction of the sac, and finally it disappears.

"Again, pressure is applicable to certain cases of aneurism to which the ligature is not, as well as to some cases in which the application of the ligature would be likely to be followed by unfavourable results. For instance, when an aneurism has attained a very large size, the long-continued pressure of the tumour must act injuriously upon the collateral circulation, compressing the veins, perhaps obliterating the arteries in its vicinity, and causing œdema of the limb below the aneurism. If a ligature under such circumstances is applied, the limb is very likely

to fall into gangrene. This cannot happen in the treatment of aneurism by compression, which acts slowly and gradually, and can be intermitted at any time.

"Again, when an aneurism has attained a large size, if its contents are principally fluid, and its parietes much thinned, inflammation and suppuration of the sac very commonly follow the application of a ligature, which may bring the patient's life into danger, and at best must render the recovery very tedious. This has never occurred yet after the use of compression, and such a result is evidently much less likely to follow it.

"Again, aneurism not unfrequently occurs in individuals in whom the coats of the artery between the tumour and the heart are so much diseased that the vessel, instead of taking on the adhesive inflammation after the application of the ligature, ulcerates—or the ligature cuts its way through—or aneurism may occur in subjects labouring under valvular or other disease of the heart. In all such cases the operation by ligature is contraindicated, and would almost necessarily fail; whereas pressure may be applied with the same prospect of success as in subjects in whom the heart and arteries are perfectly healthy. Pressure is also applicable to cases of the aneurismal diathesis, or where more than one aneurism exists at the same time—cases in which the operation by ligature is likewise contraindicated.

"Lastly, if pressure should fail in curing an aneurism, (which, from the results hitherto observed, is very unlikely,) its employment will not preclude the subsequent operation by ligature; but by retarding the increase of the aneurism, and assisting in the establishment of the collateral circulation, it would tend rather to render the chances of the operation by ligature more favourable.

"I propose now to call attention to some of the objections which have been put forward against this method of treating aneurism, and shall endeavour to reply to them.

"It has been urged as an objection to the treatment of aneurism by pressure, that the arteries are few in number to which this mode of treatment is applicable; but what is really the fact? the artery, above all others, in which aneurism is most frequent after the aorta is the popliteal, and next in frequency come the femoral and the brachial. Lisfranc has given a table of one hundred and seventy-nine cases of aneurism, exclusive of those of the aorta, collected from various works, and of this number the popliteal artery was engaged in fifty-nine instances, while the carotid was engaged seventeen times, the subclavian sixteen, and the external iliac only five times. But even this must be below the average, for few cases comparatively of operation for popliteal aneurism have been published (owing to its frequency) unless there happened to have been some peculiarity in the case; whereas most of the operations upon the iliac, subclavian and carotid arteries have been brought before the profession on account of the unfrequency of the disease in those arteries. It must be recollected also that aneurism of the subclavian or carotid arteries near their origin, and of the common iliac or innominata, which do not admit of the application of pressure, do not admit either of the employment of the ligature. It surely, therefore, ought not to be urged against this method that, because aneurism occurs in arteries beyond its reach, we should refuse to apply it to vessels to which it is adapted, or that the practice should be denounced because it is not applicable to every vessel.

"It has been objected to this mode of treating aneurism, that the pulsation is likely to return in consequence of the artery not being obliterated at the part to which the pressure is applied, and that the patient therefore cannot be considered safe from a relapse for a considerable period. Now, in my mind a case of aneurism, treated by pressure upon the artery above it, is much *less* likely to be followed by a return of the pulsation, than one treated by the ligature, and for the reasons already stated—viz., that when compression is applied in the manner which I have described, a feeble current of blood passes through the aneurismal sac for a longer or shorter period, according to circumstances, and the fibrin is gradually deposited in its interior until the sac comes to be so much filled as no longer to permit the entrance of blood. On the other hand, when a ligature is applied to an artery, as, for instance, to the femoral, for popliteal aneurism, the current of blood into the sac is at once intercepted; after a time, however, the blood finds its way into it by the collateral branches. Now, if an anastomosis of

large vessels exists between the branches of the artery above the ligature, and those between it and the aneurism, a strong current of blood will come to pass through the sac, and the pulsation will return, which cannot happen in the former case for the reasons stated. The sac of the aneurism likewise, after the application of the ligature, not being necessarily filled up by solid fibrin, but by a coagulum which may be more or less loose, pulsation is more likely to return, as the sac must contract considerably before the patient can be considered safe from a relapse; and this, from the inelastic nature of the parietes of the sac, must require sometimes a long time to be accomplished.

"It has been also urged as an objection to this mode of treating aneurism, that it is more tedious and more painful than the method by ligature. That it is less tedious, sometimes, several of the cases which have been published prove; indeed, in the case which was read at the last meeting of the society, the pulsation of the aneurism probably ceased in less than a week after the application of the two compressors; in some of the others the cure was nearly as rapid; and if in a few of the earlier instances in which this mode of treatment was adopted, a longer time elapsed before a cure was effected, it depended probably upon the imperfection of the apparatus, or upon two compressing instruments not having been employed together. With respect to the treatment by compression being more painful than the operation of placing a ligature on the vessel, including the subsequent dressings, until the ligature separates, and the wound is healed, this might have been an argument against the method, when so great a degree of pressure was supposed to be necessary as would obliterate the vessel at the part to which the instrument was applied; but the fact is, the application of the compressor (according to the rules laid down now) really relieves the pain which the aneurismal swelling occasions; after it has been applied for a certain time, it does, however, cause pain, but the patient then can relax it after having tightened the second instrument, and so continue alternately to compress different points of the vessel for any length of time.

"It has been also urged that the period which has intervened since the re-introduction of this method of treating aneurism is too short to allow us to conclude that the cures will be permanent. I do not know the exact length of time which it is considered necessary should elapse before a cure in such a case can be pronounced permanent; two of the cases of aneurism treated by compression in this city have remained well for upwards of two years, and two others for nearly the same period, and in none of the remaining cases has there been any tendency to, or appearance of, a relapse. Now, supposing for argument sake, that the aneurism should return, (which, for the reasons mentioned, is much less likely than after the operation by ligature,) the same thing has happened after the application of the ligature; and if there should be a relapse, would not pressure then be as applicable as in the first instance? and would not its employment be much more certain and safe than the application of the ligature a second time?

"The last objection to the plan of treating aneurism by compression, or rather, I should say, the last objector to this method, is Mr. Syme, of Edinburgh. His arguments against it are, however, almost confined to a few assertions, the value of which may be appreciated by the following quotation from his paper upon the subject:—'The femoral artery may be tied with so much ease, so little suffering and such perfect safety, that the laborious, distressing and tedious procedure, which has lately been brought again into notice by a surgeon of Dublin, will probably soon return to the obscurity in which it has been very properly allowed to slumber. For my own part, having tied the femoral artery *thirteen times* for aneurism, and never having met with the slightest symptom of an unpleasant nature from the operation, I shall certainly not deviate from the line of practice hitherto pursued.' Now, in answer to this piece of fanfaronnade, I shall only observe, that if Mr. Syme (after the numerous cases of the successful application of pressure which have been published, several by surgeons of far greater experience, even by his own showing, in the treatment of aneurism than himself) applies a ligature to the femoral artery in a fourteenth case of popliteal aneurism, without previously trying the effects of pressure, and it should prove a fatal one, his reflections will not be very enviable.

"I think, then, from what has preceded, we are warranted in concluding—

"1st. That the arteries to which pressure is applicable being far more frequently the subject of spontaneous aneurism than those to which it is inapplicable, compression promises to supersede the ligature in the great majority of cases.

"2dly. Pressure has several obvious advantages over the ligature, being applicable to a considerable number of cases in which the ligature is contraindicated or inadmissible.

"3dly. The treatment of aneurism by compression does not involve the slightest risk, and even if it should fail, its employment not only does not preclude the subsequent operation by ligature, but renders the chances of the ligature more favourable.

"4thly. Such an amount of pressure is never necessary as will cause inflammation and adhesion of the opposed surfaces of the vessel at the point compressed.

"5thly. Compression should not be carried even so far as completely to intercept the circulation in the artery at the point compressed; the consolidation of the aneurism will be more certainly and more quickly brought about, and with less inconvenience to the patient, by allowing a feeble current of blood to pass through the sac of the aneurism.

"6thly. Compression by means of two or more iustruments, one of which is alternately relaxed, is much more effectual than by any single instrument.

"7thly. Compression, according to this method, is neither very tedious nor very painful, and can be maintained in a great measure by the patient himself.

"8thly. An aneurism cured by compression of the artery above the tumour, according to the mode laid down, is much less likely to return than when the ligature had been employed."

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35. *Large Erectile Tumour of the Neck cured by an injection of aromatic wine.* By M. Riberi, Professor of Clinical Surgery, at Turin.—A countrywoman, 46 years of age, strong, of a sanguine temperament, catamenia regular, subject to cerebral congestions, the mother of eight children, was received at the clinique in consequence of an erectile tumour in the right lateral region of the neck. This tumour was of the size of a turkey's egg; not painful, soft, elastic, without pulsation or discoloration of the skin; base broad and seemingly lost between the muscles and the large vessels of the region. By pressing it uniformly and gradually it disappeared entirely or distributed itself beneath the skin and muscles, and there then remained a few small isolated tumours between the muscles and particularly behind the sterno-cleido-mastoid. When the pressure was removed, the tumour gradually reappeared. The tumour had first appeared three years ago; it was small, and after 28 months, it had scarcely acquired the size of a walnut. At this period the patient confided herself to the care of a quack, who endeavoured to cure her by puncturing the tumour with a small stilet made of hard wood; this occasioned severe pain, and subsequently, violent hemorrhages, which could only be controlled by the actual cautery. From this time the tumour increased rapidly in size, and then pain was experienced in it and in the adjacent parts. These characters led to the inference that it was an erectile tumour, subcutaneous and intermuscular at the same time. The situation of the tumour precluded compression; its prolongations into the deep-seated tissues rendered vaccination, cauterization, excision, the ligature and the seton alike inapplicable. Prof. R. resolved then to inject the tumour with aromatic wine, by the aid of Awl's syringe. He circumscribed firmly the base of the tumour by a ring of paste-board in the hands of an assistant; punctured it near its centre with an ordinary needle; inserted the mouth of the syringe into the puncture, and injected the liquid. He allowed the wine to remain in the tumour a few moments, and then forced it out by moderate pressure made all around the tumour. He used the aromatic wine in this case; the reaction which follows it being slighter than that which ensues after the introduction of ordinary wine. After the injection the tumour remained hard and tense. He directed bladders of pounded ice to be constantly applied to it. The next day the tumour was painful; the adjacent parts swollen, with a general febrile reaction; two bleedings were practised, in quick succession, rigorous diet enjoined, and the ice was continued. On the third day, the volume of the tumour increased;

progressive diminution in size on the following days. On the 17th day, the whole mass had dwindled to the size of a small pea. The cure was complete.

The author, who had before successfully practised this method, closes his essay with the following corollaries: 1st, the efficacy of vinous injection in erectile tumours is indubitable; it is suprising in some instances; 2d, this efficacy is not limited exclusively to superficial or cutaneous erectile tumours, it applies equally well to the deep seated. It is applicable not only to erectile tumours of the face, but also to those seated in other parts of the body. 3d, there are cases of this latter kind which it is useless to attempt to cure excepting by the injections in question. 4th, the injection is more efficacious, if it is made with wine in which aromatic herbs, as lavender, rosemary, etc., have been boiled.—*Annales de Therapéutiques*, Oct., 1844, from *Gior. Della Sci. Med. di Torino*, Aug., 1844.

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36. *Hereditary brittleness of the Bones.* By Dr. PAULI.—Many instances are recorded in which individuals have been affected with a sort of constitutional brittleness of the bones, and in whom fractures have happened with an unfortunate degree of facility. But we are not aware that this disposition has been observed in several members of the same family, so as to be in a manner hereditary. This has induced us to republish entirely the following article, extracted from a work of Dr. PAULI, of Landau.

"In the commune of Offenbach there resides a family, all the members of which have already had fractures. Three of them have each had two fractures; another three, either of the arm or of the leg; one has even had so many as five fractures of one or the other extremity; and to produce these injuries no considerable violence was in general requisite. The father and grandfather before them had fractures of the limbs. This family, moreover, is a very healthy one; there does not appear to be any scrofulous or other taint in operation. It is remarkable that not one of them suffered a fracture before the age of 8, so that one might suppose that this particular fragility of the osseous matter was developed only towards the age of puberty. It would seem, however, that the condition of this fragility consists in some change of the chemical constituents of the bones in their relations to each other.

"It has been very frequently observed that men addicted to the use of brandy often experience fractures, (in consequence of a degree of brittleness induced in the bones), which require a long course of treatment to insure their consolidation. I met with this great fragility of the bones, in a subject of this kind, a man 54 years of age, who hung himself 3 years ago at Goecklengen; the ribs, particularly, snapped like glass; and a very moderate force sufficed to fracture the long bones. But if fractures in these old drunkards are cured only very slowly, precisely the contrary is the case in the family above-mentioned; for in every instance which occurs in it, the fracture is very speedily consolidated, so that generally the callus is perfectly firm at the end of three weeks. I should add, too, that when the same bone has been broken a second time, it has never occurred at the seat of the callus.—*Journ. de Chirurgie*, Jan., 1845, from *Untersuchungen und Erfahrungen aus dem Gebiete de Chirurgie.*

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37. *Strength of Bones and the manner in which they resist External Violence.*—M. CHAISSAGNAC read a memoir on this subject before the French Academy of Medicine, on the 1st of April. The following are his conclusions:—

1. The various mechanisms by which external violence fractures the bones are —*a*. Avulsion or elongation. *b*. Bending. *c*. Crushing. *d*. Torsion.

2. When external violence tends to curve a bone, the convex fibres are elongated, and those on the concave side shortened; but between those elongated and shortened fibres there are intermediate fibres which retain their natural length so long as the curvature does not exceed certain limits.

3. The long bones having almost the figure of a three-sided prism, follow the law of solidity of that solid.

4. A triangular prism, loaded on one of its angles, resists much more powerfully than when loaded on one of its surfaces.

5. The most resisting angle of the bony prisms is that on which external causes most commonly tend to produce fracture.

6. From the configuration of the bones, it is almost impossible that the direction of the fracturing force and that of the bony fibres can ever correspond.

7. The apophyses of the extremities of the long bones being almost all continuous with one of the crests of the triangular prism, form, as it were, the base of a long pyramid attached to the central stem of the bone, which adds greatly to the strength of the bone.

8. When a force is applied in a direction parallel to the length of the limb, the principle of the decomposition of forces applies to bones, not only in their contiguity, but in their continuity.

9. The characters of the anatomical neck of a bone, considered as concurring to the decomposition of the fracturing force, are five in number—*a*. They present a contraction greater than occurs in any other part of the bone. *b*. They are placed immediateiy below an articular surface. *c*. They constantly occupy the extremity of the bone nearest to the trunk. *d*. They are more or less obliquely incident on the body of the bone. *e*. No muscle is inserted between the neck of a bone and the articular surface it supports.

10. The diminution of thickness in the slender parts of the long bones is compensated for by the greater compactness of the bony tissue in those situations.

11. The long bones being twisted both in the direction of their axis and of their diameter, approach the spiral form, which is an additional element, enabling them to resist vertical pressure, or an elongating force, assimilating them to spiral springs.

12. At a certain period of life the solidity of bones is at its maximum, after which period it diminishes continually.

13. The fragility of the bones in old age is in no way connected, as has been supposed, with the presence of adipose matter in their structure.

14. Three causes determine the brittleness of bones in old age—*a*. Interstitial absorption of the bony tissue. *b*. The relative predominance of phosphate of lime for a certain period of time. *c*. And after that period the partial absorption of the phosphate of lime itself. which latter cause has not been hitherto pointed out.—*Dub. Med. Press*, April, 1845.

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38. *On Amputation at the Knee.* By James Syme, Prof. Clin. Surg. Univ. of Edinburgh.—(*London and Edinburgh Monthly Journal of the Medical Sciences*, May, 1845.)—There are few operations in surgery, as Mr. Syme justly observes, which have excited so much discussion, or afforded room for the exercise of so much ingenuity, as amputation of the thigh. The danger immediately attending its performance, and the inconvenience of its imperfect result in rendering the stump uncomfortable, have suggested various contrivances and modifications of procedure, with the effect certainly of restraining the hemorrhage, diminishing the patient's suffering, and promoting union of the wound. But the stern evidence of hospital statistics still shows, that the average frequency of death is not less than from 50 to 70 per cent., while it cannot be denied that many of the survivors suffer from uneasiness connected with protrusion of the bone. Having from an early period of his practice devoted much attention to the subject of amputation,—having seen the circular incision give place to the flap operation,—and having witnessed the results of these methods variously modified, in the hands of many surgeons possessing every degree of operative skill, Mr. S. is at length led to the conclusion, that there is something radically wrong in the principle of the operation. This error he believes to be, dividing the thigh-bone through its shaft instead of the condyles or trochanters.

"The most frequent occasion for amputation of the thigh," says Mr. S., "is afforded by diseases of the knee-joint. Next to this may be ranked compound fractures of the leg and thigh; and then, tumours growing from the bones of the leg and thigh. Now, in regard to diseases of the knee-joint, it is well ascertained that the warrant for amputation lies in the bone, and not in the soft parts, which, however much altered through scrofulous degeneration or suppuration, readily admit of restoration to their natural condition, as is clearly shown by what happens after excision of the elbow, or amputation at the ankle-joint. In so far, therefore, as removal of the disease is concerned, it is plain that amputation through the condyles of the thigh-bone would in this case prove sufficient. As to

compound fractures of the leg, it will be admitted that if the integuments and muscles admit of the limb being removed at the middle, or lower third of the thigh, they cannot present any obstacle to a few inches more of the bone being preserved, while similar injuries of the thigh obviously require amputation at the trochanters. The same observation will apply to tumours of the bones, those of the tibia and fibula not requiring any more of the thigh-bone to be removed than may be suggested by convenience, and those of the thigh-bone itself demanding the highest practicable point of section. From this analysis it appears that taking merely the morbid condition into account, all the cases admitting of amputation at or below the middle of the thigh-bone, would admit of the operation being performed through the condyles.

"In proceeding to consider the relative advantages and disadvantages of amputating through the shaft and condyles of the thigh-bone, it may in the first place be remarked, that this, the largest member of the skeleton, contains the most extensive medullary cavity, and possesses the thickest mass of dense osseous tissue. Dense bone dies more readily than that of a spongy or cancellated structure; and the action of a saw, to say nothing of ruffling the periosteum, must always be apt to cause exfoliation, which by impeding union of the soft parts, delays union, and opposes its perfect completion, by increasing the scope afforded to contraction of the muscles. It would, however, be a narrow view to suppose that the direct effect of local injury is alone concerned in causing death of the bone after amputation; and there can be no doubt that inflammation of the medullary membrane may co-operate, if it does not sometimes act exclusively in its production. The most conclusive evidence in support of this opinion, is presented by those conical-shaped exfoliations, extending up the interior of the bone, sometimes to the length of several inches, which are occasionally extracted from stumps. One of these in my possession, taken from the humerus, is five inches long. And I believe the thigh-bone would be more fruitful of such exfoliations if amputation through it were not so fatal. But if the medullary membrane be liable to inflammation, suppuration of its texture, and inflammation of the veins cannot fail to be the frequent consequence, especially in hospitals, where, notwithstanding every precaution, certain descriptions of injuries will always be apt to excite phlebitis, and other forms of spreading inflammation. But when the bone is divided through the condyles, nothing more than the epyphisis being concerned, the medullary membrane is not at all disturbed, while the cancellated texture is not liable to exfoliate, either from its proneness to die from injury, or through inflammation of any other texture. It may, therefore, be expected that the operation would prove less fatal than when performed in the usual way; and that the stump would be less apt to prove imperfect, through protrusion of the bone. These expectations derive encouragement from the results of amputation at the ankle-joint, to which I was led by similar considerations. Of twelve cases in my own practice, and in nearly as many more in that of other practitioners, who have been induced to adopt it, this operation has not in a single instance been followed by either death of the patient, or exfoliation of the bone; and so far from selecting favourable cases for the purpose, I have repeatedly removed the foot, in circumstances where I should have declined amputating the leg as altogether desperate."

Mr. S. relates two cases, as directly supporting the operation which he recommends, one of which we subjoin:

"Jane Marshall, aged 22, was admitted on the 20th December, on account of disease in the left knee: It admitted of hardly any motion, was very painful, and over the patella exhibited two small openings which admitted a probe to pass into the joint. She had been suffering from this complaint nearly three years, in the course of which the frequently repeated application of moxa and various other means were said to have failed in affording any relief. After her admission the symptoms obstinately increased,—at length preventing sleep, destroying appetite, and threatening, before long, to prove fatal. In these circumstances it was resolved to amputate the limb on the 6th of March.

"Profiting by former experience, I on this occasion made the anterior semilunar incision on a line with the *lower* edge of the patella, and had the integuments retracted before cutting into the joint above this bone. In other respects the operation was conducted as the first one had been, and when the edges of the wound

were approximated, they came easily together, presenting a proper degree of fullness, without any straining or tension. The union was nearly completed by the first intention without any local or constitutional disturbance; the flaps, instead of showing any tendency to retraction, rather becoming more full and soft; and the patient presenting the aspect of one who had sustained some trivial injury, rather than undergone a capital operation. On the 14th day she was sitting by the fire, and took the dressings off without any assistance.

This case, Mr. S. thinks, should remove any doubt that may have existed as to the safety of amputating at the knee, and consequently as to the expediency of doing so with a view to avert the danger of operating through the shaft of the thigh bone. "It is upon this ground that I wish," he observes, "to found the operation, and therefore I have said nothing of some other advantages which might be mentioned,—such as the greater length of stump which, especially in females, must be desirable for the sake of appearance, and may, perhaps, be made available for using a support admitting of flexion at the knee,—or the facility afforded to employing the tourniquet, which causes serious embarrassment in removing the limb at any higher point. Some surgeons have objected to the tourniquet, that it may be managed, or rather mismanaged, so as to increase instead of restraining the hemorrhage. But any inconvenience from this source may be easily prevented by ordinary attention,—while on the other hand it is certainly desirable to obtain a sure command over the circulation, not liable to be disturbed through fatigue of the fingers effecting manual compression, or involuntary movements of the patient, and which leaves the principal assistant at liberty to tie the vessels. I may add, that there has long seemed to me considerable reason for suspecting, that pressure in the groin is not altogether free from risk of causing inflammation of the vein, when there is a predisposition to such derangement, since I have repeatedly witnessed the marks of inflammatory action in such cases, solely, or chiefly in the inguinal region, when examination was instituted after death I am persuaded also that the patient's sufferings will be diminished by amputating at the knee; and that the operation would prove less disagreeable to the surgeon than the one in common use.

"I may here remark, that the posterior flap must be made very long, and indeed to the full extent of the fleshy part of the gastrocnemii muscles,—care being taken, however, to avoid preserving more than a moderate portion in regard to thickness."

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39. *Amputation of a Finger by a new method.*—A robust man had a deep-seated suppuration of the middle finger with necrosis of its phalanx. The removal of the finger at the phalango-carpal articulation became necessary. M. Robert performed the operation in the following manner. He first made a longitudinal incision along the dorsal aspect of the articulation, extending from the prominence of the joint to about the middle of the first phalanx, in the direction of the axis of the finger: then turning the bistoury towards the radial side he made a lateral flap which he cut, with a single sweep from below upwards, to the articulation; opened the latter, disarticulated the phalanx, passed the knife behind it and cut the other flap in the usual manner. Two very long flaps were thus formed covering entirely the head of the metacarpal bone and affording the thickest possible cushion. Another patient operated on in the same way by M. Robert and now cured. allows us to judge of the effect of this mode of operating. The stump has a fuller and softer covering than by the ordinary mode of operating. It is readily seen, indeed, that by merely cutting two flaps by a double oblique or elliptical incision, which unite in the form of an angle on the top of the articulation, soft parts can scarcely be found to cover the head of the metatarsal bone, while on the other hand, if a longitudinal incision be first made, and then the two flaps from the middle of the phalanx, there is much more material for a stump. It is true that the operation is less rapidly done, and is less brilliant than the other, but this is of no consequence since the result is better. M. Denonvilliers had just amputated an index finger, very much after the same plan as that which M. Robert has pursued for a long time, and which M. Lisfranc formerly recommended in his lectures. M. Denonvilliers informs us that he adopts in all cases of oval amputations the same plan; that is, instead of commencing by marking out the angular shape of the flaps,

he makes at first a simple longitudinal insicion which serves as a starting point for both flaps.—*Annales Thérapeutique Méd. et Chirurg.*, Oct., 1844.

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40. *Extirpation of an Ovarian Tumour.* By Wm. B. Page, Esq., Surgeon to the Cumberland Infirmary, Carlisle.—(*Lancet*, April 5, 1845.) A woman, 33 years of age, was admitted into the Cumberland Infirmary, May 22, 1844, with ovarian disease, which had first appeared two years previously, at which time a small painful tumour was observed in the lower part of the right side of the abdomen. Health, previously good, has been of late gradually declining. The functions are regularly performed. Is subject to periodical attacks, about every seven days, of tenderness, and pain of a lancinating character in the right iliac and lumbar regions, accompanied with all the symptoms of slight febrile disturbance. These attacks were invariably relieved by rest in the recumbent posture, and the administration of small doses of hydrargyrum cum cretâ, and Dover's powder. The abdomen slowly but certainly increased in size, the attacks alluded to became more severe, and the inconvenience correspondingly great.

The abdomen appeared to be much enlarged, but more prominently so on the right side. By the hand, a globular tumour could be detected beneath the parietes, extending from the pubes below to the ensiform cartilage above, and occupying the limits of the iliac regions laterally; thus filling the whole front of the abdomen. It was distinctly movable, and might by pressure be made to ascend some inches from its natural position, and also could be readily moved towards either side, recovering its ordinary situation when the hand was removed. Its circumference was easily defined. The tumour was fluctuant, and dull over its whole surface on percussion, whilst the colon on each side was resonant. At an inch below the umbilicus, the abdomen measured thirty-four inches and a half.

On the 19th August, Mr. Page operated by making an incision four inches in length through the linea alba, commencing an inch below the umbilicus. The cyst was seized, punctured with a trochar, and after it was emptied, two ligatures were placed around its pedicle, and the pedicle divided. No hemorrhage following, the wound was closed. Complete recovery followed.

The tumour was a large globular cyst, with a smooth, white, external surface, containing nearly five pounds of fluid, its entire weight being five pounds and a half. The cyst was composed of five coats; the external, or peritoneal, retained its ordinary characters, except that it presented marks of recent inflammation and congestion in the punctiforme and maculiforme types. This redness was situated in the sub-peritoneal cellular tissue, which was denser than usual, and could be dissected off in a distinct layer. Beneath this came the somewhat dense, fibrous capsule of the ovary itself, of its natural thickness. Invested by this was that which appeared to be the proper tissue of the ovary, expanded into a thin layer, one-eighth of an inch in thickness, having a yellowish colour, and of its natural density; this was the seat of several small cysts, varying from the size of a shot to that of a bean, and containing a fluid similar to that of the larger cavity. The whole was lined by a thin semi-transparent membrane, which was elevated over three-fourths of its surface, by the deposit of a dark brown-coloured substance, between it and the last-mentioned layer, apparently of the same nature as the fluid in the sac.

The dissection of the tumour demonstrated that it was a disease of a Graafian vesicle; and the analysis of the fluid leads to the conclusion that it was of an analogous nature to, if not identical with, blood.

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41. *Sanguinous or Aneurismal Tumours of Bone.*—M. Roux read before the French Academy of Medicine in February last, an interesting memoir on this subject. Osseous structure notwithstanding its density, M. R. observes, may become the seat of a transformation similar to that which, in the soft parts, constitutes sanguinous (erectile) tumours. The capillary vessels, more especially those which depend on the arterial system, become extraordinarily developed. Perhaps when they are thus amplified, the network which they form naturally may assume a different arrangement; perhaps the capillaries are differently interlaced, anastomosed. However this may be, as these capillaries become dilated and filled with blood, the bone softens, swells, and probably there is destruction of the pro-

per fibres of the thin lamellæ which constitute its substance. At last, the disease progresses to such an extent that the external lamellæ of the bone, even those formed by the compact tissue, are reduced to a kind of thin, flexible envelop, through which the pulsations of the tumour may be felt, and which rupturing divides into little fragments, or disappears entirely. This state of the osseous substance may be compared to aneurism; it is, indeed, an aneurismal state of the capillary system of the bone. The flat bones, which have a well-marked diploic structure, such as those of the skull and pelvis, and the spongeous portion of the long bones, are the most liable to the disease. The immediate cause is nearly always a blow. As is the case in the soft tissues, sanguinous fungous tumours of bone are not always benignant; they may be endowed with a force of expansion and a rapidity of growth, which alone would render them extremely formidable, and present, on anatomical inspection, the most heterogeneous structure; or the cancerous element may manifestly be superadded. When this is the case, these tumours approximate very closely to the degenerescences of the osseous structure known under the name of spina ventosa or osteo-sarcoma. These latter appear to be merely different forms of cancer of bone, a disease which has been but imperfectly described hitherto, and which it will, perhaps, be ever impossible to delineate with precision, so great are the anomalies which it is susceptible of presenting. These tumours are so rare, that M. Roux has only seen a few well-marked cases during his long surgical career.

The only methods of treatment which can be adopted with any chance of success are—the ablation of the tumour along with the part of the bone which is diseased; the amputation of the entire part or organ affected; and, lastly, the ligature of the principal artery of the diseased region. M. Roux, after entering into these details, narrates the following cases:—

A Swiss lady left a distant colony to consult the Paris surgeons for a tumour of the head which she had had for three or four years, and which was increasing. M. Roux found that the tumour was a fungous sanguinous tumour, occupying nearly the entire left parietal region. It seemed to have had its origin in the diploic tissue, and had appeared after a contusion. The scalp was raised and distended, but not modified in its texture. The circumference of the tumour was irregular, and it was evident that it had not originated in the interior of the cranium, and forced its way through the bones, as is the case with fungous tumours of the dura mater. The tumour presented distinct pulsations synchronous with those of the arteries. There were slight symptoms of cerebral compression. The only chance of cure was evidently the ablation of the tumour, but this operation M. Roux refused to perform. The entire diseased region was, however, extirpated, at a later period, by a Geneva surgeon, and the patient died, but not until some days after the operation.

M. Roux has twice tied the principal artery of the limb in this disease: in the first instance, he was unsuccessful; in the second, successful. His first patient was a man-servant, six-and-thirty years of age, who entered the Charité on the 5th of November, 1830. Seven months previously, after squeezing a sponge with considerable violence, he experienced a sharp pain in the right wrist. A small tumour soon appeared on the anterior surface of the radius, underneath the radial artery, near the wrist-joint, and rapidly increased. It had, at first, been considered to be one of the cysts which are frequently observed near the wrist. The tumour occupied a little more than the inferior fourth of the radius, and presented a deep fluctuation; a kind of dry cortical lamella was felt to cover the fluctuating region. There was no pulsation. An exploring puncture having been made, arterial blood issued forth. The tumour then increased rapidly, became unequal in surface, and the seat of pulsation. It was considered to be of an aneurismal character, and the brachial artery was tied. No accident followed the ligature, and the tumour at first diminished, but about six weeks after the operation it began again to increase rapidly. Amputation of the forearm was deemed necessary, and performed, but the patient died of purulent resorption on the ninth day after the operation. The tumour, on examination, was found to be limited to the radius, the inferor third of which was completely destroyed, and presented partly the characters above described as belonging to the aneurism of bone, and partly those of softened cancer.

In the second case, the patient, a quarryman, aged twenty-five, felt a severe pain in his knee whilst lifting a heavy stone into a cart. The pain remained slight for eighteen months, when it became too severe to allow him to work. On his admission, there was a tumour, similar in its physical character to the one above described, occupying the head of the left tibia. This tumour, about the size of the fist, was principally developed anteriorly to the head of the fibula. The pulsations were very evident, and ceased on compression of the femoral. This artery was tied by M. Roux, in February, 1844, and the patient left the Hôtel Dieu, quite cured, in the following July. Nearly all trace of the tumour had disappeared.—*Lancet*, April 5, 1845.

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42. *On the Pulsating Tumours of Bone; with the account of a case in which a ligature was placed around the common iliac artery.* By Edward Stanley, F. R. S., Surgeon to St. Bartholomew's Hospital.—The author remarks that there are three distinct sources of pulsation in the tumours of bone—1, the proximity of the tumour to a large artery; 2, the development of blood-vessels and blood-cells, constituting a sort of erectile tissue within the tumour; 3, the enlargement of the arteries of the bone in which the tumour has arisen. Proximity to a large artery is the most frequent source of pulsation in these tumours, of which six examples are brought forward. Three occurred at St. Bartholomew's Hospital. In one of them, an encephaloid tumour originating in the humerus, the ligature of the subclavian was recommended, but not assented to by the patient. In another, it was agreed in consultation that sufficient ground existed for believing the tumour to be a popliteal aneurism, and accordingly the femoral artery was tied in the middle of the thigh. The tumour consisted of a compound of soft fibrous and dense osseous tissue, the latter situated deeply and extending around the femur, in which it appeared to have originated. Of the other three cases, two were communicated by Mr. Hodgson, of Birmingham, and the third by Mr. Lawrence. The latter is already recorded in the 17th volume of the Transactions of the Society. There are six examples of pulsating tumours, differing in their nature and originating in different tones, but agreeing in the circumstance that no other source of pulsation was discoverable in them than the contiguity of large arteries. To the same class of cases the author considers that the important one related by Mr. Guthrie belongs, in which a medullary tumour about as large as an adult head, situated upon the right nates of a female, presented so decidedly the characters of aneurism, that it was believed to be so by Sir Astley Cooper and other experienced surgeons who were consulted upon the case, and accordingly a ligature was placed around the common iliac artery.

On the subject of pulsation in the tumours of bone dependent on the development of blood-vessels and blood-cells, forming a sort of erectile tissue within the tumour, Mr. Stanley remarks, that in the case of recent occurrence in St. Bartholomew's Hospital, there certainly was a structure capable of enlargement by the distension of its vessels and cells; and assuming these to have been continuous with the surrounding arteries, the rush of blood into this structure might give to the whole mass a pulsation resembling that of aneurism. Two cases are related, in which the pulsation of the tumour was ascribed to a similar cause. In one communicated to the author by Mr. John Lawrence, jun., the tumour, originating in the upper part of the femur, was more of a gelatinous than encephaloid character, and its gelatinous tissue formed more than one half its bulk. The other, which was furnished by Mr. Luke, of the London Hospital, was a tumour of the lower part of the femur, and, in consequence of suspicion of aneurism, the femoral artery was tied. The limb was subsequently amputated, when the tumour was found to consist of cells of varying size, some of the largest being about an inch in diameter, and they were filled with blood.

Of pulsation in the tumour of bone dependent on the enlargement of the arteries of the osseous tissue, several cases are referred to; one related by Dupuytren, the others by Pelletan.

One circumstance in the history of these different forms of pulsating tumour is especially noticed by the author, as it appears to have a material influence on the production of pulsation in them,—this is, the density and resistance of the immediate investments of the tumour. He adds, that it may be doubted whether any

of these tumours would pulsate without the resistance derived in one or other direction from the bone or its coverings. A tumour originating in soft parts, and unconnected with any bone, but situated close to a large artery, and confined within resisting structures, and thus approximating in its conditions to the pulsating tumour of bone, may, like it, pulsate in a manner to be mistaken for aneurism. An example is given of a man admitted into St. Bartholomew's Hospital, under the care of Mr. Earle, with a pulsating tumour below the left clavicle, which presented all the appearances of aneurism, and accordingly a ligature was placed around the subclavian artery. The tumour subsided sufficiently to confirm the opinion entertained of its nature, and the patient was discharged. Six years afterwards he was again admitted with general derangement of the health, from which he sunk. On dissection, the axillary artery presented no indication of having been the seat of aneurism. Immediately behind the artery was a solid tumour, which had originated in the sheath of a large nerve.

After some observations tending to show the little value to be attached to the presence of bellows-sound in the diagnosis between aneurism and the pulsating tumour of bone, the author proceeds to relate the case of pulsating tumour of the ilium which has recently occurred in St. Bartholomew's Hospital, in which a ligature was placed around the common iliac artery. The patient, a man aged 42, had on the inner side of the right upper arm, a tumour about the size of a small orange, very loosely connected with the surrounding structures, free from pain, and without pulsation. This tumour was first observed about ten years ago, and during the last three years it had ceased to grow. The pulsating tumour of the pelvis had its chief attachment to the left ilium, and projected from both surfaces of the bone. It reached downwards to Poupart's ligament, and to the extent of about three inches into the abdomen. It felt moderately firm, and a little below the crista, near the anterior superior spine, a small movable piece of bone was discovered apparently involved in the tumour. Everywhere within reach of the fingers the tumour pulsated, not with a thrill or vibration, but with the deep heavy beat of aneurism. By the ear resting against the abdominal parietes, a bellows-sound was plainly recognized. After a minute description of the local features and constitutional phenomena of the disease, the author observes, that in deciding on the nature and treatment of the case, the following points were involved—was this pulsating tumour an aneurism? and if so, from what artery had it arisen; or was it one of the pulsating tumours of bone? He then states the arguments which, in consultation, led to a preponderance of opinion in favour of this tumour being an aneurism. In the uncertainty respecting the origin of the supposed aneurism from the external or internal iliac artery, the decision would obviously be that the common iliac should be tied, and the man having decidedly expressed his feeling in favour of submitting to the operation, the author considered it his duty to undertake it. The operation was performed on Monday, the 27th of January. The case proceeded favourably to the middle of the second day, when symptoms of peritonitis ensued, and he sunk on the morning of the third day from the operation. On examining the body, the effects of peritonitis were observed in the deeper parts and left side of the abdomen. In the wall of the left ventricle of the heart there was a medullary tumour about the size of a filbert. Medullary matter was found in the bronchial glands, and a few deposits of the same kind in the lungs. A minute description is given of the tumour in the pelvis, which was connected with the ilium, and composed of a spongy tissue with cells and convoluted vessels distributed through it. The tumour in the arm, which had all the marks of an innocent structure, was found, to the surprise of the author, identical in structure with the tumour in the pelvis.

This paper is concluded by some remarks on the operation of tying the common iliac, or the external iliac near its origin, tending to show that with the least risk of injury to the peritoneum, the readiest mode of reaching these vessels must be by an incision through the posterior part of the abdominal parietes.

Mr. Toynbee briefly referred to a case he had lately dissected of a young man who had died of consumption at the age of 19. The patient had a pulsating tumour of bone differing from Mr. Stanley's cases, inasmuch as it was almost entirely composed of blood-vessels, and contained no cells or other structure. It was situated at the point of ossification of the parietal bones.

Mr. Ferguson regarded the paper of Mr. Stanley with much interest. It showed the great difficulty which experienced surgeons might encounter in deciding on the true nature of certain kinds of tumours connected with the pelvic region. He had seen several cases similar to those brought under notice by the paper. Two of these cases had been under the care of Mr. Syme, of Edinburgh, and illustrated the diagnosis of these cases, even to experienced and able surgeons. These cases occurred during his (Mr. Ferguson's) connection with the Royal Infirmary, and he had consequently had an opportunity of seeing them. Mr. Syme had published them in his Clinical Reports. In one of these cases there was a swelling in the situation of the external iliac artery, which was considered to be aneurismal; other surgeons, however, were of a different opinion. Mr. Syme, however, acting chiefly on his own responsibility, determined upon placing a ligature high up on the external iliac, or on the common iliac artery, as might seem advisable. On completing the incisions through the abdominal parietes, it was discovered that the tumour was not an aneurism; it was nevertheless removed, and the patient sunk a few days after the operation. It was then discovered that tumours of a similar kind were situated in various parts along the course of the chief arterial vessels; they were smaller in size than that removed, but it was evident they owed any pulsation they possessed to their connection with the arteries. In a second case, in which a tumour was also situated in the course of the external iliac, much difference of opinion existed amongst the most distinguished surgeons of Edinburgh respecting its true nature. Eventually a ligature was placed round the common iliac artery. The patient died, and the tumour was found to be aneurismal. Another case, which had come under the observation of the speaker, resembled in many points the cases mentioned by Mr. Stanley. The pulsation and the *bruits*, said to be diagnostic of aneurism, were present; he, however, refused to operate. He was led to this determination from having recently become acquainted with Mr. Guthrie's case, to which reference had been made in the paper. After death the tumour was found to be very similar to the cases mentioned in the paper. The tumour was prominent in the pelvis both internally and externally, and the os innominatum was completely destroyed. The tumour was composed chiefly of medullary matter, clots of blood, and spiculæ. Mr. Nicol, of Inverness, about the time of the occurrence of these cases, had treated a tumour connected with the upper part of the shoulder-bones, supposing it to be aneurismal.

The case was similar to one related by Mr. Luke, inasmuch as the tumour had resulted from an injury. A ligature was placed round the subclavian. At first the operation appeared successful, but the patient soon died, and the tumour was found to be malignant.—*Lond. Med. Gaz.*, March 21, 1845.

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43. *Reduction of Dislocations of the Shoulder.*—(*Lond. and Ed. Monthly Journ. of Med. Sci.*, April, 1845.) Mr. James Syme has repeatedly effected reduction of very recent dislocations of the shoulder-joint, without any assistance, by placing one hand on the acromion, and then having bent the forearm to a right angle, suddenly drawing the elbow backwards, so as at the same time to rotate the hand backwards. He relates the following case. A patient came from the country, a distance of twelve miles, for the purpose of having a dislocation of his shoulder reduced. Seeing, says Mr. S., from the position and powerless appearance of the arm, that the bone was displaced, and having felt, by putting my arm under his clothes, that its head lay in the axilla, I desired him to take off his coat. No sooner had this, with some assistance, been accomplished, than he declared that he felt his shoulder quite right, which it really was, no doubt from the action required for withdrawing his arm from the sleeve.

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44. *Remarkable case of Penetrating Wound of the Abdomen in a Pregnant Women.* By M. Scaruffi.—The following case is certainly one of the most extraordinary recorded in the annals of science, of the introduction of a foreign body into our tissues. Remarkable at once from the considerable size of the body, it derives additional interest from the fact that the woman thus injured was pregnant at the time, and from the fortunate recovery which followed so serious a wound.

On the 4th June, 1843, at 10 o'clock A. M., a woman 24 years of age, the mother of two children, and now five months advanced in pregnancy, was en-

gaged in picking leaves from a mulberry tree, when the branch upon which she was standing broke, and she fell upon a stake placed near the tree. Some persons who were attracted by her screams, seeing her stretched upon the ground, endeavoured to raise her; but they experienced great difficulty, for the stake, which had penetrated very deeply into her thigh, riveted her to the ground.

The first attempts at extraction served only to break the stick at a point seven inches within the substance of the thigh which it had entered. Having no longer any hold upon the stick, the physicians had the patient conveyed to the hospital, where M. Vannoni saw her. Her face was pale, eyes sunken and dull, surface cold, pulse small and weak, respiration feeble, speech hesitating, with nausea and vomiting; she had not been able to urinate since the accident occurred, 15 hours before. On the posterior part of the thigh, and a little towards its inner aspect, just below the superior third, was a lacerated and contused wound four inches wide, involving the skin and muscles. Another wound of the same kind, but only four or five lines wide, and almost confined to the skin, existed in the left lumbar region, on a line with the exterior margin of the sacro-lumbalis muscle. Here a tumour was felt, hard, slightly movable, traceable as far as the antero-superior spine of the ilium, and seeming at this point to disappear in the lower pelvis. If this was touched, the patient experienced pain extending from the wound of the thigh towards the tuberosity of the ischium, and more severely towards the wound in the loins.

Its removal was commenced 2½ hours after the entrance of the patient. The stick was broken at a point too deep to be reached from the wound in the thigh; it was necessary to cut down upon the tumour which it formed in the lumbar region, first through the integument, then the muscles, and finally the peritoneum. The index finger of the left hand was then introduced, and a probe-pointed bistoury slid along upon it, by which the aperture was enlarged. It was necessary to push down the piece of wood in order to disengage it from the two lower ribs, which its superior bifurcated extremity had in a manner clasped on their inner face. It was then seized with a pair of stone-forceps, and thus extracted,—a knotty stick eight and a half inches long, and between three and four inches in circumference. At the moment of its withdrawal one of its bifurcations was broken. Immediately, M. Vannoni introduced his finger, to ascertain if there was any other fragment remaining; but he could feel only the uterus exposed. The edges of the incision were approximated by suture; and the wound in the thigh was closed by adhesive plaster.

The reaction was speedy, and so great as to render bleeding necessary. Abortion occurred at the end of six hours; the placenta exhibited an extravasation of blood upon its uterine surface.

The introduction of the catheter was requisite for several days. The next day, and the day following, the patient was bled twice, and was twice leeched. The cicatrization of the wounds was retarded by an attack of erysipelas, and by the escape of two pieces of bark, which were discharged on the 3d and 4th July.

When the patient left the hospital on the 11th Sept., the exact distance between the wound on the thigh, and that in the loins, was found to be seventeen inches and two lines.—*Gazette Médicale de Paris*, Dec., 1844, from *Gazette Toscana delle Science Medico-fisiche*, June, 1844.

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45. *Empalement by an Iron Spindle which penetrated the left buttock, and passed out by the right of the navel.*—M. Bessems has published in the *Annales de la Societé de Medicine d'Anvers* (Jan., 1845), an account of a case of penetrating wound, which in several points of view, is as remarkable as the one recorded in the preceding article.

The subject of this case was a lad 14 years of age, who fell from the top of a bed about four feet high, on an iron spindle blunt at the point, a foot long, and of the thickness of a large quill, which was inserted by its handle in a wooden block. After the fall, during which he experienced no particular pain, his body was inclined forwards and to the left, supported by the left shoulder resting against the wall and by the feet upon the ground; the thighs were slightly bent upon the pelvis.

On attempting to rise he felt himself pinned by the buttock, at the same time

perceived with surprise rather than fright the spindle protruding from the belly at the side of the navel, having moreover perforated in this situation his shirt and trowsers. Maintaining remarkable *sang froid*, he detached the axis of the block, and thus transfixed, walked down about a dozen steps of a staircase to call his mother, who pulled out the spindle, and then waited the arrival of a surgeon.

The axis had acquired only a slight curvature at the line of junction with the handle.

At his admission into the hospital three days after the accident, this patient presented merely two small round wounds; one on the anterior wall of the abdomen about three-quarters of an inch to the right of the navel, in the direction of a line drawn from thence to the anterior superior iliac spine; the other in the fold of the left buttock about two and a-half fingers' breadth from the anus. These two wounds, surrounded by a reddish circle, furnished a slight exudation.

The pain, which the preceding evening had been vague and radiating over the whole abdomen, was, on admission, very trifling, and confined to the margin of the front wound. Otherwise there was no morbid symptom; the belly was supple; appetite, digestion, stools, and urine, natural; not the least febrile reaction.

This favourable condition lasted up to the period of the patient's dismissal, twenty days after the casualty.

It would appear in this case that the spindle after penetrating the left buttock at two and a half fingers' breadths from the anus, must have traversed diagonally from below upwards the left half of the pelvic hollow and a part of the abdominal cavity in order to have forced a way out by the right of the navel. The anatomical disposition of the peritoneum is such that in this course the spindle must have necessarily rent this serous sac. Yet this lesion, reputed so serious by surgical writers, was not followed by any mischief.

Another remarkable particular connected with the above fact is the absence of visceral injury. If it be reckoned that during the vertical position in which the lad was when the thing occurred, the intestinal convolutions must have filled the entire pelvic cavity, it is difficult to conceive how an iron spindle could have passed through this cavity amid the convolutions without doing any hurt.

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46. *Paracentesis of the Thorax in acute Pleuritic Effusion.*—M. Trousseau communicated to the French Academy of Medicine, March 25, the results of three operations of paracentesis of the thorax successfully performed in effusion from acute pleuritis. The first of these cases differs from those previously published by M. Trousseau, in that the dyspnœa was not considerable. M. Trousseau made some reflections on the value of this symptom, as its absence might be deemed a contraindication of the operation. Dyspnœa and orthopnœa, according to M. Trousseau, do not constitute any measure of the degree or seriousness of the effusion, as they may not exist when the effusion is considerable, especially if it has formed slowly. According to M. Trousseau, the signs that constantly indicate the gravity and imminent danger of effusion, and which consequently call for the operation are, the displacement of the heart, whence result syncopes, displacement of the mediastinum, depression of the spleen and of the liver, acceleration and feebleness of the pulse, and an anxious countenance.

M. Trousseau mentioned a curious physical phenomenon which immediately follows the evacuation of the liquid—viz., the sudden ampliation of the thorax from the rush of air in the bronchial tubes, which is so intense that recently-formed adhesions are usually destroyed thereby.—*Dub. Med. Press*, April, 1845.

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47. *Diagnosis between Gonorrhœa and Leucorrhœa.*—Dr. Skae and Mr. Benbow, in an interesting memoir on the statistics of the Lock Hospital of Edinburgh, in the *Northern Journal of Medicine*, April, 1845, state that they are convinced from their observations that the features described in works on forensic medicine as affording a means of diagnosis between gonorrhœa and leucorrhœa, are extremely fallacious. Gonorrhœa, it is said, affects the lower part of the vagina only, while leucorrhœa proceeds from a higher source.* This may be true in certain recent cases of

* See Beck's Medical Jurisprudence, &c. &c., Art. Rape.

gonorrhœa, the result of violence; but it is by no means true in the great majority of cases. In many instances which we have seen of the disease in its acute stage, the mucous membrane of the vagina was inflamed throughout its whole extent, and also that of the cervix uteri; while a discharge exactly similar to that secreted in the vagina was also seen issuing from the os uteri. And in chronic cases, on the other hand, so far from this statement being accurate, we believe that the discharge of gonorrhœa proceeds principally from the *upper* part of the vagina.

It may be said that the characters of the discharge will enable any one to distinguish between the two affections. This may also be true in some instances; the thin mucous discharge of the first stage of gonorrhœa, and the purulent dis; charge of the stage immediately succeeding, are certainly distinctive if taken in conjunction with the other signs of inflammatory action, and are no doubt diagnostic. But when the affection has assumed a chronic character, it is not distinguishable from leucorrhœa, either by reference to its seat or the character of the discharge; the discharge in both instances is the result of a similar condition of the same membrane, which in some cases is pale and relaxed, in others livid and congested.

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48. *Ligature of the External Iliac Artery for Femoral Aneurism.*—Dr. James Duncan relates in the *Northern Journal of Medicine*, March, 1845, a case of femoral aneurism successfully treated by a ligature to the external iliac artery. The subject of the case was a sailor 30 years of age, and the tumour which had originated nine months previously, measured six inches in length, extending from about an inch above Poupart's ligament downwards. The operation was performed as follows:—An incision dividing the skin and superficial fascia was made, commencing about an inch above the middle of Poupart's ligament, and carried upwards for about 3½ inches, in such a direction as to be, when it passed the anterior and superior spinous process, about an inch or more internal to it. It was slightly curved, the concavity being towards the mesial line. The aponeurotic expansion of the external oblique, the internal oblique, and transversalis, was divided to the same extent. The fascia transversalis was next divided to the requisite extent, the peritoneum carried inwards, and the vessel exposed. The thin fascia covering the artery was divided to a very slight extent, and the needle carried round the artery, with its convexity towards the peritoneum, counter-pressure being made with the forefinger of the left hand. As a small filament of the nerve lay over the needle along with the artery, another needle was passed from within outwards, the first being retained to serve as a guide. The vessel was now compressed over the needle, and immediately the pulsation in the tumour ceased. The ligature was secured, one end being cut close to the knot. The securing of the ligature was followed by immediate cessation of the pulsations, and collapse, to a certain extent, of the tumour. The wound was brought together by several points of suture, and lint wetted with cold water applied. The patient was laid in bed, with the limb slightly bent, and supported by pillows at the knee. The ligature came away on the 22d day, and by the end of February, a small hard knot could only be felt in the original seat of the tumour, and the man was well in all respects.

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49. *Proposal to treat Protracted Mammary Abscess by the Breast-pump and the Syringe.* By Alex. Wood, M. D. (*Northern Journ. of Med.*, Jan., 1845.)—This proposal, which appears to be a novel one, and to be well worthy of trial, is as follows. "As soon as the indistinct fluctuation or rather the boggy feeling, by which the formation of matter in these abscesses can be detected, is distinctly ascertained, let a small bistoury or abscess lancet* (the common lancet will sometimes not penetrate deep enough) be carried down until the matter begins to escape. After all that can be squeezed out by pressure is removed, let the breast-pump be applied over the orifice, and the rest of the matter be drawn out. The sinus is then to be injected with some astringent solution, by means of a small syringe. The syringe employed is the small glass one for the urethra, sold by most apothecaries. The lotion I have hitherto used is the one recommended by Mr. Hey, though it may be doubtful if it possesses any peculiar advantages. ℞. aquæ

* A subcutaneous incision-knife would answer well.

puræ ℥xv; spt. rosmarin. ℥i; spt. lavandul. com. ℥i; zinci sulphat. gr. xxx.—M. fiat lotio. The sulphuric acid lotion of Sir A. Cooper will probably answer as well.

"A pledget of lint dipped in the lotion is then to be applied outside, and covered with oiled silk; over this a compress may be placed, and firm pressure maintained on it by means of adhesive plaster. In some cases the walls of the abscess will unite at once, and all that remains to be done is to trust to time for the removal of the surrounding induration, or to attempt to discuss it by frictions with camphor liniment, mercurial or iodine ointment, or the application of the emplast. ammoniaci cum hydrargyro.

"Where the surfaces do not thus unite, the falling in of the breast, produced by the exhaustion of the glass, will be found to have disappeared; the cavity in such cases has only to be injected two or three times a-day, which will serve at once to keep the opening free for the discharge of matter, and will also tend to arrest the further extension of the ulcerative process.

"The treatment of acute and more superficial abscess may be conducted on the same general principles. The early evacuation of the matter saves the patient much suffering, and also enables the nursing on that breast to be resumed at a much earlier period. The cicatrix is also much smaller than in cases where the matter is allowed to discharge spontaneously; indeed, if the incision be made in the direction of the natural folds of the breast, that is, radiating towards the nipple, the cicatrix will in a short time be imperceptible.

"Dr. Wood has tried this plan in three cases, and with results which warrant him in suggesting it to the consideration of the profession."

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50. *Dissecting Aneurism of the Thoracic Aorta.* By R. L. Macdonnel, Esq. (*Lond. Med. Gaz.*, March, 1845.)—A woman, 50 years of age, in apparently good health, awoke towards morning with excruciating pain in the epigastric region, and in about an hour afterwards suddenly expired The following appearances were revealed on dissection. The pericardium contained about four ounces of serum tinged with blood and some coagula; the membrane was in other respects healthy. A firm mass of coagulated blood completely surrounded the great vessels. This coagulum was bound down by the thin layer of serous membrane which passes up from the heart along the vessels, to be reflected on the fibrous layer of the pericardium. The left ventricle was dilated and hypertrophied. The semilunar valves were all in that condition termed atrophy, viz., they were perforated in different parts, but more especially towards their free margins, with small, round, and oval-shaped holes; and in other situations they were very much thinned. The aorta, in the situation of the attachment of the valves, was healthy; but about an inch from this situation, there was a laceration extending transversely, and with edges as well defined as if cut with a scalpel; it penetrated the internal and middle coats of the artery, but left the external one quite whole; it was one inch and three-eighths in extent, and from it a probe could be passed downwards, between the external and middle coats, as far as to a level with the upper border of the semilunar valves; but farther than this, *i. e.*, behind the sinuses of Morgagni, it could not be passed. The orifice of this slit was partially closed by a coagulum of pale fibrin, and on tracing this up we found that it lay between the external and middle coats of the vessel, but did not extend far, and was not attached. A probe passed upwards, advanced as far on the right side as to the division of the innominata, and for about half an inch along the course of the left subclavian and carotid arteries, to which extent the middle tunic of these vessels was separated from the outer one; but the space was not occupied by a coagulum; it appeared as if the separation had been the effect of a violent pumping of blood between the coats of the vessels, which had afterwards burst into some other situation, leaving this space empty except towards the laceration, where there was a pale fibrinous clot.

The opening in the cellular coat through which the blood escaped, was round, about the size of a fourpenny-piece, and was filled with a dark coagulum, which extended downwards, closely embracing the aorta, and separating this vessel from the pulmonary artery at the exact point where, in health, they lie in apposition. In this situation the coagulum exercised a considerable compression on the pul-

monary artery, by which the vessel was much flattened. The coagulum lay beneath all that portion of the reflected layer of pericardium, extending from the zonæ tendineæ of the right and left ventricles to where it is reflected on the under surface of the fibrous layer of the membrane. The serous membrane was perfectly whole, except at a small point corresponding to the junction of the right ventricle with the left auricle, where there was a small aperture through which the small quantity of blood in the bag of the pericardium had evidently escaped. The clot was hard and solid, and was fixed in its position, from its being completely entangled in the cellular tissue lying between the serous membrane and the outer coat of the arteries, and between these two vessels at the point where the pulmonary artery passes anterior to the aorta; in this spot the coagulum was thicker than in any other.

The coagulum occupied exclusively all that space external to the vessels, and underneath the serous membrane; it passed downwards on the auricles to where they join the ventricles, and it also passed some way upwards, beneath that membrane which anatomists describe as descending from the deep layer of the cervical fascia, to become continuous with the fibrous layer of the pericardium.

In other respects the aorta was extensively diseased, being thickly coated from the commencement of its transverse portion, all along its descending course, with bony plates and ætheromatous deposits. Indeed, the only part of the artery which appeared free from this disease was the very situation where the laceration took place; for immediately to the left of the opening there was another large osseous deposit. On comparing the middle and internal coats of the artery, at the seat of rupture, with other parts, they were found to possess scarcely half the thickness, and were much more friable, though the vessel did not present, in any part, traces of acute inflammation. Towards the commencement of the arch the vessel was somewhat dilated, but not to a greater extent than is ordinarily observed in individuals of her age.

The mouth of the innominata was filled with a dark and firm clot, which extended for some distance along this vessel and its two divisions, and appeared to have been produced by the mechanical pressure exercised on it by the clotted blood which lay between its outer and middle coats. The lungs and liver were greatly engorged, no doubt the result of the mechanical pressure exercised on the veins leading from them, and of the almost complete obliteration of the cavities of the auricles.

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51. *Treatment of Hemorrhoids with Chromic Acid.*—Alex. Ure, Esq., reports in the *Lond. Med. Gaz.*, (March, 1845,) two cases of hemorrhoids successfully treated with chromic acid. This substance is a most powerful oxidizing agent, and is exceeding convenient of application, inasmuch as it consists of a thick crystalline pap, which, when rightly managed, does not spread beyond the prescribed limits; and so soon as its erosive operation is finished, it passes into the state of inert pulverulent sesquioxide.

The first case was a tailor 31 years of age, who had, at the verge of the anus, a dark hemorrhoidal tumour, the bigness of half a walnut, of which the surface is ulcerated and extremely painful. The tumour had been extruded several days, and various attempts at reduction proved of no avail. The patient seemed in a most deplorable state, haggard, and worn out by suffering, from which he could only obtain a brief respite by observing a half bent posture. He had been subject to piles for some years. The bowels were open. Mr. U. applied the chromic acid freely over the whole of the diseased surface.

April 29th.—Patient says that he felt considerable uneasiness in the part during the whole afternoon following the application. He is now quite comfortable in all respects. A considerable slough has been detached, and the excrescence is withered and shrunk to the bulk of a raisin. Bowels confined. Half an ounce of castor oil.

May 1.—Complains of a feeling of aching referred to the sacral region; bowels torpid; inappetence for food; sense of languor and listlessness. To take an ounce of compound infusion of gentian, with a drachm of Epsom salts, every morning.

May 13.—Perfectly cured. The trifling remains of the pile are wholly insensible, and create no inconvenience whatever; his bowels act naturally.

The second case was a married woman, aged 50. For a month previously she had been suffering much from two hemorrhoids situate upon the right side of the verge of the anus, each about the size of a kidney bean, and was anxious to obtain alleviation. Various external and internal means had been already employed, but in vain. She had been troubled with piles at different times during the preceding eight years. Her general health is tolerably good, and the bowels usually regular. Since her last confinement, ten weeks ago, she has complained of shooting darting pain referred to the anus. It was determined to apply chromic acid, which was accordingly done May 30th. It was found necessary to repeat the application on the 1st of June. This caused acute burning pain both times, destruction to a considerable amount of the diseased texture, consolidation of the remainder, and permanent relief from the distressing aliment.

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52. *On the Formation of Bone by the Periosteum.* By ALEX. WATSON, M. D.—(*Ed. Med. and Surg. Journ.*, April, 1845.) It was long believed that the periosteum not only conveyed nourishment to the bone which it enveloped, but also mainly, if not solely, contributed to the reproduction of bone in cases of necrosis and fracture. Latterly, however, the accuracy of this opinion has been called in question, and Prof. Muller, of Berlin, maintains that the periosteum has nothing to do with the production of bone. The difference of opinion entertained on this subject led Dr. Watson to enter into a minute and careful investigation of it, and the following are the conclusions at which he has arrived:—

1. That the theories alleging that new bone is formed only by the living parts of the old bone, in cases of necrosis and fracture, are incorrect.

2. That the periosteum has evidently the power to produce new bone of itself, without the aid of the old bone.

3. That the formation of new bone by the periosteum consists, at first, in the deposition of osseous matter in the form of a fine microscopic net-work; and, therefore, that the Haversian canals are only a secondary, not a primary formation in osseous tissue.

4. That in cases of necrosis and fracture, the process of reproduction of bone by the periosteum is the same.

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53. *On the Microscopic Texture of Cancer.*—M. DESORMEAUX has recently published a valuable inaugural dissertation entitled *Recherches sur la theorie elementaire de la production des tissues accidentels*, in which he has given an excellent summary of all the recent researches on the intimate structure of cancerous formations.

Müller, and (since the publication of his writings) most other pathologists, has arranged these morbid growths into two great families or groups, viz., the Encephaloid and the Scirrhous. Of the former he makes the following three subdivisions.

1. Carcinoma medullare, *in which there is a predominance, in the medullary mass, of round globules over loose fibrous tissue.* The globules are of various sizes; but the smallest are larger than pus-corpuscles. Each contains a granular subtance or nucleus within. They are very similar, in many respects, to those of common cancer, and of reticulated carcinoma or scirrhus.

2. Carcinoma medullare, *consisting of pale, elliptic, non-elongated corpuscles, and of a fundamental cerebriform mass.* These corpuscles are usually twice or three times as large as the globules of the blood. There is never any appearance of fibres proceeding from their surface, and they rarely exhibit any traces of nuclei within them.

3. Carcinoma medullare *with fibrated or fusiform corpuscles.* This species of Encephaloid structure has at times, on laceration, a sort of fibrous aspect, when the fusiform corpuscles are arranged in a somewhat determinate direction. According to the direction which they assume, the morbid mass will present a radiated or a tufted appearance. In many cases, indeed, their directions are so various that the lacerated surface exhibits no trace of fibres anywhere. The fusiform corpuscles are sometimes nucleated; at other times they contain granular points, but without distinct nuclei. They are elongated on one or two sides into fibres of different lengths. They may be considered as cells that are arrested at the period of the process of transition from the cellular to the fibrous condition.

The three forms of the disease now described may (most probably) be regarded as so many degrees or stages in the development of the same tissue; these successive stages being characterized, 1, by rounded nucleated globules; 2, by elongated oviform globules, which are either non-nucleated, or indistinctly so; and, 3, by fusiform globules.

These several kinds of globules may be regarded as so many successive epochs of evolution, through which a *cell* must pass before it can become a fibre. Thus we find that, in an Encephaloid mass, there is the same transformation of the primitive elements as occurs in many normal tissues—with this difference only, that the process of evolution is not complete, being arrested before the fibrin is perfectly formed. There is a perfect analogy in their mode of formation. The essential element of an encephaloid tumour is the presence of cells. In some cases the entire mass is composed of them, placed one alongside of the other, but without having any perceptible bond of union; while in others, there is a network of fibrous or cellular tissue interposed between the cells. When this fibrous tissue prevails, the encephaloid then approaches in characters to the scirrhous structure. In the latter, the existence of the two elements—cells and fibres—is always more distinctly marked than in the former. The fibres are often quite perceptible by the naked eye. Sometimes they are lengthened and run parallel to each other: at other times, they form rounded capsules, within which the globules are contained. As in the case of the newly-formed fibres of the cellular tissue, so those of a scirrhous formation are destroyed by acetic acid, leaving nuclei or nucleated fibres behind. The fibres sometimes exhibit at different points a sort of varicose enlargement, within each of which a nucleus is found. This appearance is often observed in fibrous tumours (not genuine scirrhus) of the uterus and other parts.

In the *reticular carcinoma* of Müller, the white network, which encloses the scirrhous globules in its meshes, is formed of round opaque granulations, three or four times as large as the blood-globules; they are occasionally agglomerated into rounded masses. The genuine scirrhous tissue, of a pale grayish colour, is composed of globules that, on the whole, resemble those of the first stage of an encephaloid formation. These globules are either round or somewhat oval: along with them we find free *nuclei* with their *nucleoli*.—(Vogel.)

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From a variety of observations we may reasonably conclude that the cells of scirrhus are formed around the nuclei of which M. Vogel speaks; their contents are at first granular and almost opaque. When the process of softening commences, the granulations disappear, the globules become transparent, and within them are formed new cells, which at first are few in number, and gradually multiply, until they entirely fill the parent cell. M. Valentin, who, in part at least, admits this account of the progress of the cells, says that the parent cells eventually burst and discharge their cellules: in this way we may account for the presence of young free cells in scirrhous formations that have become softened.

The intercellular substance seems to undergo certain modifications corresponding with the evolution of the cells; the granulations or granular points, which it often contains, usually disappear, and it becomes limpid, while at the same time the space, which it occupies, is diminished by the enlargement and multiplication of the cells.

The fibrous network does not appear to follow in its alterations the development of the cells: it may remain firm and resisting, while the cells are far advanced in their evolution. Even when a scirrhous tumour has become completely softened, this tissue sometimes forms shreds that retain their original character.

In *alveolar cancer*, the basis of the morbid tissue consists of white fibres and lamellæ, which cross and intercross with each other, intercepting between the meshes thereby formed limpid cells, either closed or communicating with each other, of various sizes from that of a grain of sand to that of a large pea, and filled with a transparent gelatinous substance. In this substance there are cells, and these cells contain other cells more minute. The smallest of these cells exhibit at one point of their parietes a distinct dark-yellowish nucleus, and sometimes also many free and unattached granules floating within them. To this species M. Müller refers the *gelatiniform* and *areolar cancers* of Laennec and Cru-

veilhier. The cells of this species of the disease appear to be only an advanced or more mature degree of the cells of scirrhus.—*Med. Chirurg. Rev.*, April, 1845, from *Journal de Chirurgie*, Oct., 1844.

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54. *Ligature of a Polypus of the Bladder.* By Dr. THIENEMANN.—Augusta S., 45 years of age, unmarried, had long complained of pain and difficulty of making water, of bloody urine, &c.; when one day suddenly a dark red body, which bled freely, presented itself between the labia. Careful examination discovered it to be a polypus, the size of a hen's egg, and projecting from the urethra, which could readily be entered with two fingers, and the pedicle of the polypus, which was one third of an inch thick, followed into the bladder, without however getting to its point of attachment. I succeeded in throwing a ligature around it by means of two elastic catheters, and then with a proper canula, constricted it as far within the bladder as I could reach. On the third day the ligature was tightened, and on the sixth the polypus fell off. The patient recovered completely.—*Lond. Med. Gaz.*, Nov., 1844, from *Medicinische Zeitung.*, No. 9.

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55. *Re-establishment of Nervous Action after Autoplastic Operations.*—M. JOBERT (de Lamballe) in a memoir read before the French Academy of Sciences in February last, states the following to be the results of his experiments on man and animals:—1st. Immediately after autoplastic operations, sensibility diminishes or disappears in the flaps, the diminution of the sensibility being directly in reason of the loss of blood. 2d. The section of the pedicle is followed by complete loss of sensibility, but after a certain length of time it reappears, and increases in the same proportion as the vascularity; both sometimes increase beyond the limits of the normal state, but always simultaneously. The anatomical examination of the pedicle gives the following results:—1st. After its section, the flaps are separated from all parts of the economy by cicatricial tissue. 2d. The only means of communication that exist between the flaps and the rest of the economy, are the vessels, more or less developed, which pass through the cicatricial tissue; no nervous filaments are ever met with. 3d. The nerves which existed primitively in the flap become atrophied, and may end by disappearing. 4th. Those of the neighbouring parts stop at the level of the cicatrix. Sometimes they are suddenly interrupted, presenting a kind of swelling of the neurilemma; sometimes they lose themselves in the cicatricial tissue, but it is never possible to follow them into the flap.—*Lancet*, April 5, 1845.

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56. *Severe injury of the Thigh.*—A young man was thrown from his horse against a carriage, the shaft of which penetrated the limb, entering on the inner part and coming out at the opposite side, passing between the mass of muscles and the femur. The patient lost a great deal of blood, and was carried to the Beaujon Hospital; the main arteries, however, did not seem to be injured. The stupor into which he was plunged, determined M. ROBERT to order for him strong coffee, which had an excellent effect, the patient recovering promptly from the shock. The case appeared to be doing very well for several days, when the patient was attacked with a tremendous hemorrhage from the wound, under which he sank. At the autopsy, the superficial crural artery was found at one point to be ulcerated, and opened; stretched, contused and ecchymosed at others. The internal coat was torn in several spots, and the middle injured by the stretching. So that, even if the artery had not been opened by ulceration at one of the contused points, the patient would have had, sooner or later, several aneurisms in the course of the limb. Such very severe injuries are rarely met with; it is probable, however, that had it not been for the unexpected hemorrhage, the patient would have recovered.—*Annales de Thérapeutique*, Oct., 1844.

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57. *Treatment of Syphilitic Affections.*—At a recent meeting of the Surgical Society of Ireland, the proceedings of which are reported in the *Dublin Medical Press*, an interesting paper was read by Dr. M'Egan, on the diagnosis and treatment of syphilitic diseases. In the discussion to which this paper gave rise, the president, Mr. Carmichael, took occasion to give a brief account of the origin and progress of his own investigations on the subject, and after alluding to the opposition which his

views had at first encountered, and exposing the attempts which had been made to suppress them, by some practices of very questionable character, concluded by making the following observations in reference to the employment of mercury.

1st. I do not think it necessary in the treatment of the simple primary ulcer without induration, nor for the papular eruption, and other constitutional symptoms it produces; but should the eruption linger into the fourth or fifth week after it has desquamated into scaly spots or blotches, mercury in alterative doses, either in the form of Plummer's pill or the proto-ioduret of mercury, will be of service in clearing the skin of the eruption, and in removing the pains of the joints, which are constantly present in this form of venereal. But I protest most strongly against the use of mercury at the period when the eruption first appears in its papular form, at a time that it is usually preceded and accompanied by considerable fever, like all the other exanthemata, to which class of Cullen it obviously belongs. If we should exhibit mercury prematurely during the eruptive stage of this as well as the other forms of disease, the scaly excepted, we may possibly clear the skin of the eruption, but in all probability it will return again and again, to the great disappointment of the patient and perplexity of the medical attendant.

2d. For iritis I would give mercury, so as to excite its full effect upon the system, and at the same time not neglect the usual antiphlogistic measures to remove this dangerous inflammation.

3d. For nodes I would exhibit mercury, and I think the iodide of that mineral for their removal is superior to any other preparation.

4th. For phagedenic primary ulcers I have always found mercury most injurious. They are most successfully treated by the application of strong nitric acid, immediately followed by a douche of cold water. The same application is also the most efficient for phagedenic ulceration of the throat, which if not checked will soon extend over the velum, uvula, and back of the pharynx, from whence it will spread upwards into the nares, and downwards into the larynx; in either of which situations I need not state the difficulty and danger of the case. Instead of the douche of cold water, in this situation inadmissible, I employ a probang: the sponge moistened in a solution of soda or potash will neutralize any superabundant acid applied to the ulcers. During the eruption of pustules or tubercles which cause those crusts termed rupia, I have found mercury injurious, although its exhibition may at first flatter both patient and surgeon that the disease is yielding to this remedy. But the natural tendency of this eruption is also to become scaly after it has existed several weeks or months. This scaliness is a sign that the disease is on the decline, and indicates that mercury in alterative doses may then be employed with safety and advantage. Should any of the constitutional ulcers on the skin spread after the rupia crusts fall off, their progress may also be effectually checked by the application of nitric acid to their phagedenic margins. They of themselves first show signs of healthy reparation in their centres, which need not therefore be meddled with. Mercury in this stage of the disease should not be exhibited. Hydriodate of potash, sarsaparilla, country air, and the tranquilizing effects of opium, should the patient be harassed by extensive ulceration, are the constitutional means most to be relied upon.

5th. For the true Hunterian chancre with hardened edge and base, and for the scaly eruption which attends it, as well as the deep excavated ulcer of the tonsil, nodes, and other symptoms belonging to this form of the disease, mercury may be esteemed a certain and expeditious remedy.

These are the views I entertained more than thirty years ago, as appear from my various publications on the subject; and it surprises even myself not a little that after so long an experience, I have felt no occasion or necessity to depart from them. But I have often been pained at finding that many of the profession, particularly in the army, range themselves under the denomination of mercurialists or anti-mercurialists—*i. e.*, they either exhibit mercury in all venereal cases or refrain from it in every instance, regardless of the characters of the symptoms and stages of the disease. It may, however, be satisfactory to those who are indolently disposed, and wish to follow routine practice, to know that mercury may be given in general with advantage when an eruption is *scaly*—no matter whether or not it has been scaly from the commencement.

In fine, from my publications, as well as from what I have stated this night, it

is obvious, that although in the great majority of cases I consider the exhibition of mercury unnecessary or injurious, yet in one form of disease, that which produces the scaly eruption, lepra or psoriasis, it is the remedy upon which I place my sole reliance; and in other forms of venereal which produce the papular, pustular, tubercular, or rupia eruptions, there are stages and states in which it will be found a most useful auxiliary. Therefore, though it may accord with the natural indolence of our dispositions to treat all cases in either one way or the other, yet no practitioner, I aver, will be successful in following this routine mode of practice, who does not exert his powers of discrimination to ascertain to what class the symptoms under treatment belong; for no matter, in a practical point of view, whether there is one or a plurality of venereal poisons, (as I advocate,) it is of the utmost consequence, to ensure an efficient and successful issue, to consider the form of the disease under consideration, and to which of my classes it appertains.—*Prov. Med. Journ.*, May 21, 1845.

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58. *Aneurism of the Arteria Innominata and Arch of the Aorta.* By GEORGE W. CAMPBELL, M. D., Lecturer on Surgery in M'Gill College.—(*British American Journal of Medical and Physical Sciences*, April, 1485.)—John Smith, aged 48, called on Dr. Campbell on the 22d of February last, with a pulsating tumour occupying the lower portion of the right side of the neck, of the origin of which he gave the following account:—He stated that about a fortnight previously when in the act of splitting a piece of firewood, the axe being raised at the full stretch of his arms above his head, he felt something give way in the lower part of his neck, accompanied by a sudden sensation of gasping for breath, which lasted only a few seconds; upon putting his hand upon the right side of his neck, he discovered a small tumour about the size of a marble immediately above the sterno-clavicular articulation, pulsating strongly, and so movable, that he could get his fingers round it and push it backwards and forwards under the skin. Not deeming it of any importance, he paid little attention to it, and as it gave him no inconvenience, and was unattended with pain, he was only induced to ask medical advice on account of the great rapidity of its growth.

Smith was a tall, powerfully built man, of a sanguineous temperament, had served for twenty-four years in the King's Dragoon Guards, had left the service two years previously upon the return of the regiment to England, and for some years past had been greatly addicted to the intemperate use of ardent spirits. He had complained for several years of occasional severe pain in the right shoulder and side of the neck and head, which he thought was rheumatism, but with the exception of these occasional attacks, was strong and healthy, was never absent from parade, and had no difficulty in performing his military duties, while in the service, or in attending to his work as an ostler in a livery stable, since he left it. Had no palpitation, cough, or shortness of breath. When Dr. C. first saw him, the tumour had attained the size of a large egg, was visible both upon the tracheal, and external margin of the sterno-cleido-mastoid muscle, measuring 3½ inches in its longest diameter, which was transverse to the axis of the neck, and extending vertically above the sternum and clavicle for 2½ inches; it could be followed into the chest, and was felt pulsating as low as the junction of the cartilage of the second rib with the sternum. The tumour was capable of being almost entirely dispersed by compression, the pulsation being equable all over its surface, apparently increasing in proportion to the pressure employed, at each impulse strongly elevating the fingers, and whenever the pressure was removed, instantly regaining its original dimensions. Upon firmly compressing the carotid artery of the right side against the transverse processes of the cervical vertebræ, the pulsation in the tumour was arrested, and it became soft and flaccid. A similar effect was produced, but not in so marked a degree, by compressing the subclavian over the first rib. The pulse was equally good at the wrist and in the branches of the carotid on either side. Upon percussing the chest, the inner portion of the right sub-clavicular region was found to sound dull, and upon the application of the stethoscope, a distinct pulsation was discovered in that situation, gradually losing its intensity as the heart was approached. This pulsation gave a strong impulse, was double, was not attended by any thrill, and only a very slight bruit de soufflet: it might be compared to a heart beating strongly at the top and to the right side of

the sternum. Neither bruit nor thrill was discoverable in the tumour above the clavicle.

The effect of a restricted diet and the exhibition of digitalis with avoidance of exercise was tried for a fortnight, at the end of which period, although the general force of the circulation was much diminished, and the man had become weak and pale, the tumour still continued to increase slowly in bulk, and its parietes became very thin. As the aneurism, if left to itself, would evidently very shortly prove fatal, and as by its extension both in an upward and outward direction, it was daily adding to the difficulty, and diminishing the prospect of success from an operation upon either of the great arterial trunks, it was resolved to give the patient the chance afforded by the operation upon the distal side of the tumour, so ably advocated by Mr. Wardrop. It was accordingly performed on the 8th of March, in the following manner:

"The patient was placed upon a table in the recumbent posture, with the head and shoulders slightly elevated, the neck extended by raising the chin, and inclining the face towards the opposite side. An incision about three inches long was made through the skin and superficial fascia, along the anterior border of the sterno-mastoid muscle, extending from a little below the angle of the jaw, to the superior boundary of the tumour, which was upon a level with the cricoid cartilage; the platisma and deep fascia were divided to the same extent upon the director, the sterno-mastoid and omo-hyoid, which were now distinctly brought into view, were respectively drawn outwards and inwards, by broad retractors, and a little further division of the cellular tissue by a silver fruit knife, and the finger nail, exposed the sheath of the vessels. Owing to the muscularity of the neck the artery lay at a considerable depth from the surface; the integuments being borne off the sheath of the vessels by the strong contraction of the mastoid muscle, a very large vein was seen crossing the artery, apparently coming from the thyroid body, and passing obliquely outwards and downwards to empty itself into the deep jugular; the vein being drawn upwards, and the sheath being opened, an aneurismal needle, armed with a well waxed single silk ligature, was passed round the artery; the vagus nerve was seen external to the artery, but the deep jugular vein did not come into view. The artery was raised a little from its sheath upon the ligature, to ascertain the condition of its coats, which were found very sound and healthy; the ligature was then gradually tightened and firmly secured by a common double knot, one end of it being afterwards cut off. Immediately upon tightening the ligature, the aneurismal swelling completely disappeared, and no trace of it could be discovered for several minutes; after a short time, however, it began gradually to return, but it did not nearly regain its original size, measuring only 2 inches in the transverse diameter, and rising little more than an inch above the sternum; the pulsation was by no means so strong, and it was much softer, and more compressible than formerly. The pulse before the operation was 96; during the operation it sank to 88, and became very small; immediately afterwards it again rose to 96; little or no blood was lost. Immediately upon tightening the ligature, the patient complained of severe pain in the side of the head, the pupil of the opposite eye became slightly dilated, he felt for a few moments bewildered and confused, and could with difficulty be induced to remain quiet. The wound in the integuments was brought together by the interrupted suture, a compress and bandage were applied over the aneurism, and the patient was put to bed with his head and shoulders elevated. The liniment. sapon. c. opio. was ordered to be applied hot, to the side of his head, where he complained of the pain; the digitalis was to be continued, and the diet was restricted to toast and gruel in small quantities."

For the first two days the patient was very much troubled with a teazing cough, which was somewhat allayed by opiates. On the 11th of March primary union had taken place in lower half of incision, upper half discharging slightly and looking healthy. Tumour diminished to the size of a walnut, very compressible, and pulsating by no means strongly. Pulsation still heard distinctly at upper part of sternum, without bruit and double as formerly. Cough not so troublesome. The compress was re-applied. The case made satisfactory progress from this to the 23d of March, at which date the wound had nearly cicatrized—ligature was still firm—tumour quite flat, and can only be discovered by a slight pulsation, which

still exists at inferior and internal part of its former situation. Pulse returned to temporal artery on right side—pupil of left eye still slightly dilated—pulsation at upper part of sternum much diminished in impulse—functions all natural. The compress upon the tumour was discontinued, and the digitalis and restricted diet persevered in.

The following night the patient sat up by the stove for a considerable time without any other covering than his night shirt; this exposure was followed by a rigor, succeeded by high fever, and Dr. C. found him on his visit, March 23, slightly delirious, complaining much, with hurried respiration; heart's action very tumultuous and strong. By depletion, opiates, &c., he was relieved. March 24, upon examining the chest, the dull sound on percussion was found to extend over a much greater portion of the right sub-clavicular region than formerly, and a pulsating tumour could be felt with the fingers extending from the cartilage of the third rib to the clavicle. Upon applying the stethoscope, no bruit was discoverable, but impulse was very strong and sound double—a loud bronchial rhonchus was heard upon the right side during inspiration; the point at which it was most distinctly heard, was posteriorly, internal to the scapula; it was at the time attributed to compression of the right branch of the trachea by the aneurism—no return of tumour in the neck.

*March* 27.—Dr. C. was sent for to his patient at 2 o'clock, A. M., and found him sitting up in bed suffering from great dyspnœa—countenance of a livid colour—pulse 150 very small—heart's action exceedingly tumultuous—left pupil largely dilated—two pulsating tumours were felt rising up upon both sides of the sternum, the larger one upon the right side, in the situation of the original aneurism, these tumours were not well defined, as the whole neck was swollen and of a livid colour from venous engorgement. The distressing sense of suffocation gradually increased, and he expired at five o'clock, P. M., of the same day. He was perfectly sensible to the last and knew that he was dying from the first seizure.

"*Post-mortem examination* 15 *hours after death.*—The surface of upper part of chest, neck, and face, presented a livid appearance from venous engorgement. Upon opening the thorax a large tumour was discovered, resembling very much, in size and appearance, the heart enclosed in the pericardium, occupying the superior portion of the right side of the chest, and extending towards the left side, half an inch beyond the centre of the first bone of the sternum. The tumour filled up the whole of the anterior and middle mediastinum, above and in front of the root of the right lung, extending from the cartilage of the third rib to the top of the sternum. The tumour was removed from the body along with the heart and great vessels within the thorax; the upper part of the sternum, with the inner half of the clavicle, and the 1st, 2d, and 3d ribs attached to it; the trachea, œsophagus, anterior muscles, great vessels, and nerves of the neck, were also removed, as far up as above the os hyoides, and the whole was subsequently carefully dissected. The left ventricle of the heart was found slightly hypertrophied, the aortic valves were free from disease, the ascending aorta was greatly dilated, and numerous scales of bone were found deposited in, and under its lining membrane. The aneurismal swelling commenced at the root of the arteria innominata, involving the whole of the anterior parietes of that vessel, to within a quarter of an inch of its bifurcation, and the transverse portion of the arch of the aorta, as far as the giving off of the left carotid, the origin of which was slightly dilated. The first bone of the sternum, the sternal ends of the clavicle and first rib, were denuded of periosteum, and formed part of the anterior wall of the aneurismal sac, the first bone of the sternum being deeply hollowed out by the pressure of the contained blood. From the superior part of the large tumour, the remains of two smaller aneurisms were found arising; the posterior one, the larger, extended into the neck, upwards, and towards the right side, for at least a couple of inches above the clavicle; its sac in front was composed of the deep cervical fascia, and external and internal to the mastoid muscle, was exceedingly thin and weak. The sac of the anterior aneurism was capable of containing a small walnut; it arose from the large sac about the centre of the sternum, by a distinct opening, immediately in front of that into the posterior aneurism; the sacs of both these aneurisms were found empty and collapsed. The interior of the large aneurism was almost completely filled by a large coagulum, weighing eight ounces and a quar-

ter avoirdupois, very dense in structure, not deep in colour, formed of distinct lamellæ, and in many places slightly adherent to the parietes of the sac. A loose coagulum of blood, very different in appearance and structure from the fibrinous mass occupying the interior of the aneurism, was found in the ascending aorta. The descending aorta was dilated as far as the diaphragm, and contained ossific deposits in its interior. The right carotid was found nearly divided by ulcerative absorption, produced by the ligature, half an inch below its division; the vessel was plugged up by a firm coagulum, for upwards of two inches below the ligature, the superior part was also filled up in a similar manner as far as its bifurcation. The superior part of the right lung was found condensed in its substance, from the pressure of the tumour. The left lung was congested throughout, and posteriorly and inferiorly was found in the first stage of pneumonia. The liver was larger and harder than natural, the other abdominal viscera were healthy. The brain was found quite healthy, and the branches of the internal carotids seemed equally large on both sides."

The above case, Dr. C. remarks, is instructive in several particulars. It proves first, what a great amount of aneurismal disease may exist for a long period, (as evidently must have been the case in this instance from the deep erosion of the sternum,) without any severe local or constitutional disturbance. It proves secondly, how much compression of the carotid can affect the circulation in an aneurism of the innominata, even involving the arch of the aorta; upon the application of the ligature, the tumour for the time entirely disappeared, and never again regained any thing like its original bulk. I have little doubt also, says Dr. C., that the production of the fibrinous coagulum, found in the interior of the larger aneurism, was subsequent to, and in a great measure produced by, the obstruction in its circulation caused by the ligature of the carotid. The mere bulk of this unyielding mass, from its pressure upon important organs, conjoined with the febrile paroxysm brought on by the man's own imprudence, may have had a considerable share in bringing about the fatal result.

59. *New Fracture of the Humerus.*—Dr. Houston laid before the pathological Society of Dublin some examples of a peculiar lesion of bone, which, he stated, had never been appreciated in its true light by the profession until demonstrated at that society by Mr. Smith; he meant that lesion of the anatomical neck of the humerus to which the term impacted fracture may be properly applied. He had three specimens for exhibition. The great interest attached to the observation of this accident was the establishment of an analogy between it and a similar one, which also had been first noticed in that city by Dr. Colles, in connection with the femur, and called impacted fracture of the neck of the femur. Sir Astley Cooper, in a paper in the Guy's Hospital Reports, on fractures of the neck of the humerus, had described and even delineated this accident, but without taking any notice of the remarkable impaction to which the bones were subjected. An important practical observation made by Dr. Houston was, that in all his cases there had been complete and firm reunion of the fragments, by bone, and that, too, with only a trifling degree of deformity. With regard to the diagnosis of this injury, Sir A. Cooper, in the memoir above alluded to, says that the lower fragment gets forward, so as to admit of being pressed and felt under the pectoral muscle, and lays this down as one of the most characteristic symptoms of the injury. Dr. Houston showed that, in his cases, and also in the drawings published by Sir A. Cooper and Mr. Smith, in which the fracture ran through the anatomical neck of the humerus, close to the articulating surfaces, the displacement of the lower fragment was more outwards than inwards, the impaction being of such a nature that the inner edge of the shaft was driven into the centre of the spongy part of the head; or, in other words, that the detached head was twisted half round, so as to be placed somewhat on the inside of the shaft; a position which the bones had manifestly taken and maintained from the first moment of the accident, and which rendered it physically impossible that the lower fragment could ever have been felt in the position which it has been said by Sir A. Cooper to assume, under the pectoral muscle. In all the cases of the kind of fracture known to Dr. H., the angle formed at the point of the lesion was salient outwards, viz., at the great tuberosity; and this was shown by him to contrast strongly with the deformity in

a specimen in which the fracture had occurred in the surgical neck of the humerus, or close below the tuberosities, as here the lower fragment projected to the inside of, and beyond the upper, in such a manner that it might have admitted readily of being pushed, when recent, in the direction of the axilla and pectoral muscles, and of being felt there.—*Dublin Hospital Gazette*, April 1, 1845.

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## OPHTHALMOLOGY.

60. *On the Treatment of Inversion of the Eyelids.* By Professor Gerdy.—Notwithstanding the many operations proposed for the relief of trichiasis, and ectropion, the practitioner often finds himself embarrassed in the cure both of trichiasis, whether partial or complete, and of inversion of the margin of the eyelid. This difficulty has for many years attracted the attention of Professor Gerdy, who has just published in the *Journal de Chirurgie*, an interesting essay on this important subject.

Eight or ten years ago, M. Gerdy was consulted by a patient who had tried various means for the relief of a most distressing trichiasis. The skin of the upper lid had been several times excised in a line parallel with the length of the organ; M. Gerdy himself had excised it with as little success as those who had attended the patient previously. He then conceived the idea that it might answer the purpose to remove the whole margin of the upper lid, carrying the excision beyond the bulbs of the eyelashes. He examined how far these bulbs extended, in order that he need not expose himself to the liability, on the one hand, of removing them but imperfectly, nor, on the other, of excising too large a part of the upper lid, thus leaving the eye exposed. He ascertained that it was only necessary to remove a strip of four millimetres in width, at most, along the free margin of the upper eyelid, and of three millimetres along that of the lower, if it were also affected. Considering the condition of the lid of his patient, the long duration of the affection, his continual sufferings, and the strong desire he felt to be cured, M. Gerdy decided upon operating, and had reason to congratulate himself upon it. Since that period, other cases have been operated on with success; but the following case will exhibit more satisfactorily the value of this proceeding, which, however, the author does not resort to excepting when it would seem that the excision of the skin of the lid would not answer, or has already failed.

A farmer of Saint-Owen, 42 years of age, entered La Charité on the 8th Feb. This individual had been in the hospital four years before. He had then, two or three lines outside of the external angle of the left eye, a small ulcerated tumour consisting with an inversion of the eyelashes of both lids. The tumour was removed, and the edge of both lids was excised to an extent which included the ciliary bulbs. This resection had the desired effect; the edges of the lids cicatrized and remained deprived of the lashes; the eye was still sufficiently protected; there was no lachrymation; in short, in this respect, the condition of the patient was all that could be desired. But the tumour which was removed at the same time, and which was a *noli me tangere*, was reproduced in both eyelids and demanded the entire removal of the superior, and also a portion of the lower lid. This operation was performed on the 8th April, 1844. M. Gerdy divided the external commissure of the lids, and then circumscribed the tumour by a semicircular incision of which the concavity was downwards, commencing at three millimetres from the internal angle, beyond the superior lachrymal duct, and ending at the external angle. The operator removed all that was included in this incision, excepting a small portion of the mucous membrane which he reserved towards the external angle for the purpose of covering the edge of the upper lid at the point which should correspond with the external commissure of the lids, and of preventing adhesion of the lids within this point. The partial excision of the lower lid presented nothing peculiar in the mode of operating.

This being done, M. Gerdy, in order to satisfy himself as to the necessity of replacing the upper lid by a new one, directed the patient to shut the eye, which was effected completely by the contraction of the eyebrows. This fact rendering

the utility of the intended blepharoplastic operation doubtful, the patient was spared the pain of it.

During the first few days succeeding the operation, pledgets saturated with cold water were carefully applied to the eye. After some days the wound commenced suppurating. Granulations sprouted up on the edges of the mucous membrane and of the skin; they were repressed with nitrate of silver, and gradually formed a thin, uniform, shining and firm cicatrix, which constituted the margin of the lid. After the 20th April, the result of the operation was appreciable. At first sight, there was but little difference in appearance between the eyes: the left eye was completely closed by a slightly forced contraction which had the effect of drawing down the eyebrow and subjacent skin. If the contraction was but slight, the eyelids were not brought perfectly in contact with each other; they remained separated at one point by an interval of about two millimetres. The transparent cornea, however, was protected by a consentaneous upward motion of the eyeball, so that the sclerotic alone was visible in the interstice of the lids. It must be also noted that the patient had no lachrymation.

Thus, we see, that the most obstinate and complete version of the lids may be overcome by the excision of their entire ciliary margin, without inducing permanent exposure of the globe of the eye, or great deformity, or serious inconvenience, to the patient; that this mode should be resorted to when the removal of the skin has failed, and when a trichiasis occupies the greater part of the palpebral margin.

It is proved, also, that the entire superior lid and a portion of the inferior may be removed or destroyed without its being rendered necessary to replace them by new lids, by means of the painful operation of blepharoplasty; that nature, properly assisted, can cure the patient without the eye remaining exposed to the air and light, without any epiphora existing, notwithstanding that the free orifices of the lachrymal ducts have been very much modified, or perhaps entirely destroyed.

Such are the inferences which M. Gerdy draws from the preceding facts. We quote, in conclusion, a passage from the essay in which the author, with the sarcasm which distinguishes him, expresses his opinion with regard to the restoration of the eyelids, and autoplastic operations generally.

"The case of Daunay," says he, (the one which we have just quoted,) "is important not only for the practical knowledge which it furnishes as to the radical cure of trichiasis; it is interesting to the surgeon in another respect. It shows that we should not despair of the power of nature even in the most severe lesions of the eyelids, and that we ought not lightly to decide upon carving out from the forehead, the temple, or the cheek, a miserable flap of skin to usurp the noblest region of the face. The eyelids are so slight and delicate in their organization, their functions so well adjusted and so beautiful; they are so flexible, susceptible of such motion, and so rapid in their movements; they play so prominent a part in expression, from the manner in which they conceal or expose the eyes, that it is difficult to replace them with any advantage by a flap taken from a neighbouring part. The thing which is thus produced cannot be called an eyelid, it is a something unpleasant in appearance, and for which there is no name; it changes entirely the expression of the face, interferes with the vision of the patient, offends the eyes of all who see it, and looks more like a shapeless, ugly plaster than an eyelid formed to beautify, to protect the eye and to assist it in the performance of its functions.

"Assuredly, if we considered only the deformity, the imperfection, and the defects of these so-called eyelids, which, from a sort of paternal weakness, we exhibit with so much pride, when we ourselves have been the architect of them; if, above all, we reflected upon the sufferings which these miserable eyelids cost, we should for ever banish blepharoplasty as well as rhinoplasty from operative surgery. But we would not, in the case of a part of less consequence, reject and proscribe the whole class of plastic operations. If, in the sort of patch-work which autoplasty makes, whether well or ill, by dint of needles and pins and waxed or unwaxed threads, blepharoplasty is more nearly allied to a tailor's than a surgeon's work; if it resemble it still more closely, in some instances, from the variety in colour of the parts brought together, and which reminds one involuntarily of the

contrast produced by patching a piece of new cloth upon a worn out garment, whose poverty it conceals and glosses over; if it lower in some degree our art, it is in a few cases really useful, and must not be discarded."—*Journal de Médecine et de Chirurgie Pratique*, Oct., 1844.

61. *Motions of the Iris.*—M. Maunoir,* of Geneva, to support the view which he has so long maintained of the existence of the sphincter muscle around the pupil, and the radiated muscle in the rest of the iris, states that galvanism excites contraction of both these muscles, and that in a recent case of accident he had an opportunity of observing their antagonist action. A man received a small penetrating wound through the lower part of the cornea, and a point just higher up in the iris. When the cornea healed, a triangular false pupil was found at the wound of the iris. Both this and the natural pupil could contract and dilate; but, on the contact of light, the false pupil dilated and enlarged when the natural one contracted, and the false pupil contracted when, in the absence of light, the natural one was dilated. [The result of a number of observations in cases of artificial pupil, wounds of the iris, &c., by E. H. Weber,† went to prove, that the movements which occurred could not be explained by supposing that the iris has circular or radiated fibres, or both, but only by believing that its irritable part consists of fibres variously woven together without any definite direction.]

A good discussion of this subject has been published by Dr. C. R. Hall.‡ He considers that the iris has a circular muscle for the contraction of the pupil; that the dilatation of the pupil depends, probably, on the cellular tissue or the blood-vessels of the iris having an unusual vital contractility; and that the only effect of the elasticity of the tissues of the iris is to accommodate it to changes of size, and to restore it from extremes to a medium state—*i. e.*, to the size which it usually has after death.—Paget's *Report*, in *Brit. and For. Med. Rev.*, April, 1845.

62. *Regeneration of the Crystalline Lens.*—Valentin§ has found, in two rabbits, that four months after the extraction of the lens, a new body has been produced smaller than it, yet presenting, to microscopic examination, the peculiar cells and fibres of the natural lens in stages of development similar to those through which they naturally pass. These were mixed, however, with minute granules; their arrangement was not quite regular in all parts; and in both cases there was at the lower part of the new lens, opposite the injured part of the capsule, a yellow turbid portion, formed of a finely granular substance quite different from lens-substance. In both cases the capsule of the lens was transparent, without any trace of blood-vessels. The appearances indicated that the new lens was formed from cytoblastematous substance oozing into the emptied capsule, and that thus its harder central parts were those which had been longest engaged in development, and were most perfect. Ernst Brücke‖ has pointed out an ingenious mode of demonstrating the structure of the vitreous humour, derived from the fact that when two solutions which will precipitate each other, permeate, or are imbibed in membranous septa, the precipitate first forms in and upon the membrane. By placing the vitreous humour of an eye cut vertically and transversely behind the lens in a concentrated solution of acetate of lead, he found its surface soon covered with a white substance, and when, some hours after, a portion was cut off from the posterior part, the section was seen marked by fine milk-white streaks, which were edges of layers of which the outermost lay parallel to the retina, the innermost parallel to the posterior surface of the lens. The distances

* Report from the Académie des Sciences, 19 Fevr., 1844; in the Gazette Médicale, 24 Fevr.

† Hildebrandt's Anatomie, bd. iv. p. 80.

‡ Edinb. Med. and Surg. Journal, July, 1844.

§ Oesterreische Medic. Wochenschrift, Fevr. 10, 1844; from Henle and Pfeuffer's Zeitschrift, 1843, bd. i. heft. ii.

‖ Müller's Archiv., 1843, heft. iv. p. 344. Pappenheim (Specielle Gewebelehre des Auges, 1842, p. 182), said that the vitreous humour, when treated by carbonate of potass, "may be stripped in concentric layers almost like a bulb;" but did not demonstrate any of these layers of membrane.

between the streaks were greatest in the axis of the eye, and became less towards the zonula, where they were about $\frac{1}{250}$ of an inch apart. The margin of the layer appeared to be connected with the hyaloid membrane near the zonula, but in what way could not be determined. The vitreous bodies thus treated with lead separate more easily in the direction of the layers than in any other.—*Ibid.*

63. *Amaurosis from Fungoid Tumours of the Cerebellum.*—Mr. Simons communicated the following interesting example of this to the Birmington Pathological Society. A porter, aged 25, of rather full habit of body, about two years back, was taken with pain and giddiness; this was repeated two or three times, for which he was bled, purged, &c.; his eyesight now began to fail him, and pain in the head continued. Occasionally, upon going home at night, he could not see his way for some time. He then applied to the Eye Infirmary, where he underwent a course of treatment, but gradually got worse, and became completely amaurotic. At this time he was admitted into the General Hospital, and continued there without any improvement for about six weeks. "He now came under my care, when he principally complained of pain in the back of his head; the eyes were bright, quite insensible to light; he was very morose and dull in disposition, but was easily excited, and became very passionate; had no inclination whatever to occupy himself in the manner that persons in his unfortunate situation do, but preferred sitting in the corner from day to day. There was slight imperfection in walking.

"He went on in this way without any material alteration until about four months before his death; when one morning I called, and observed the right eye very much inflamed, and the cornea ulcerated; there was no discharge; no sensibility to light; and so little pain, that neither he nor his friends were aware of it. By treatment the eye quite recovered its wonted clearness. His bowels now began to be very costive, and we had great difficulty in keeping them open; he also had great difficulty in voiding his urine.

"His health now began to give way; his appetite failed him, and he complained of most violent pain in the occiput; always obliged to sit in the stooping position, or resting his forehead on the table. For about two months before his death, even this position was not sufficient to give him ease, but the lower he could bend his head the easier he felt, so that for two months preceding his death he used to sit on a chair by the table, with his head bent below the level of the table, and in this position take his meals, which he would reach off the table with his hand, and convey to his mouth in this crouching position. He died on the morning of the 21st of January, without any aggravation of his symptoms.

*Sectio Cadaveris*, forty hours after death.—"The membranes of the brain healthy, the substance quite firm, the left ventricle contained fully half a pint of clear colourless fluid, the right about four ounces; the substance of the brain was so firm that the finger was moved about in the ventricles freely, without injuring the septum lucidum; corpora striata and optic thalami, healthy; most of the base presented a degree of softening, the more decided by comparison with the consistency of the remainder of the brain; this condition affected more particularly the surface of the crura. The pons and medulla oblongata had quite lost their consistency.

"The cerebellum was very large. It contained a fungus as large as an orange, which occupied the left and a part of the right lobe. It grew from the back part of the organ, where it was attached by an extensive base, and projected into a cavity within the cerebellum, occupying the place of the natural nervous tissue. The remaining substance of the organ, which enclosed this cavity in front and on the left side, was about half an inch thick, and quite healthy. The inner surface of the cavity, and the surface of the fungus, were thickly coated with a matter, which had much the appearance of inspissated mucus, though rather less tenacious. The texture of the fungus was somewhat softer than the natural condition of brain; it seemed to be composed of altered cerebral substance.—*Prov. Med. and Surg. Journ.*, April 30, 1845.

64. *Iritis in Infancy.* By John Walker, Esq., Surgeon to the Manchester Eye Hospital.—(*Prov. Med. & Surg. Journ.*, May 7, 1845.) Iritis, in infants, is probably, in most cases, owing to a syphilitic taint derived from the mother, either

before birth or during suckling, but Mr. WALKER very justly remarks that there is no reason why the first named disease should not occur independently of such cause in infants as it does in adults, and it must not be assumed therefore to be always necessarily of syphilitic origin. "The symptoms of the disease in question, are," Mr. Walker remarks, "very different from those of the ordinary ophthalmia of infants. The conjunctiva is but slightly affected, so that there is rarely any mucous or purulent secretion observed. The sclerotic coat is generally inflamed, and hence the deep-seated and pink-coloured vessels are often numerous, and there is usually considerable intolerance of light and lachrymation. But it is principally in the iris and capsule of the lens that the more striking and characteristic symptoms are noticed: thus the colour of the iris is usually changed, its brilliancy is materially impaired, and its movements are sluggish, if not actually suspended, the pupil being usually much contracted, and sometimes of a very irregular shape. The morbid action rapidly extends to the capsule of the lens, as indicated first by a muddiness in the pupil, and subsequently by a deposit of lymph, which soon becomes organized, and is permanently adherent to the texture of the capsule.

The danger to vision in these cases will depend upon the amount of opacity of the capsule, or of the contraction of the pupil. If either of these conditions is extensive, and likely to be permanent, then an unfavourable, or at least a guarded, prognosis should be given.

In the treatment of this variety of ophthalmia, we must rely chiefly on internal remedies, and such as affect the system at large. In most cases it will be useful to apply leeches to the palpebræ in such numbers as are suitable to the age and constitution of the child. Purgatives, and in some cases even nauseants, should be freely administered in the first instance; but these must not be allowed to supersede the employment of mercury. Small doses of calomel, or of the hydrargyrum cum creta, should be administered without delay, and continued until the progress of the disease has been arrested, or the system has been brought under the influence of this powerful agent. Belladonna should also be applied freely around the orbital region, so as, if possible, to keep the pupil in a state of expansion. In some instances an evaporating lotion may be usefully prescribed in the more acute stage of the disease, but the belladonna must be regarded as the paramount local remedy.

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65. *Remarks on the Pathology of Iritis.* By J. F. FRANCE, Assistant Surgeon to the Eye Infirmary.—(*Guy's Hospital Reports*, Oct., 1844.) The main object of this paper is to show that arthritic and syphilitic arthritis should be considered as distinct forms of disease, and to point out the peculiar habitudes of each. Simple iritis, the author conceives to be very rare as a primary affection, independently of wound, injury, or disturbance.

The early and middle periods of manhood are the ages most liable to syphilitic iritis, whilst arthritic iritis is most frequently met with in elderly people. In both, the feeble and cachectic are those who chiefly suffer, at least among the applicants in hospital practice.

"In well marked cases of syphilitic iritis," Mr. France states, "the first morbid changes in the membrane itself are commonly observed at or close to the margin of the pupil, where the iris is found not only to have its mobility impaired and its brilliancy tarnished, but the sharpness of that margin lost; and as the disease advances, the natural colour of the iris, at one or more inflamed points, which appear thickened, is seen to give place to the development of a dusky reddish-brown hue (frequently described by the terms foxy or cinnamon-colour), which has been correctly deemed an almost absolute gnomon of syphilis.* This colour, as the disease progresses and the tumefaction becomes greater, is usually rendered still more striking; but it sometimes is obscured, to a certain extent, by fibrin effused into the cavity of the anterior chamber, which presents the ordinary light-

* It is a curious fact, that a similar tinge of reddish brown (copper colour) characterizes syphilitic cutaneous eruptions. More truth is conveyed than was ever intended in the remark—

Heu! Quam difficile est crimen non prodere vultu!

yellow colour of similar effusions elsewhere, or, in very acute cases, may be discoloured by admixture of red particles of blood, and remotely stimulate the reddish swelling of the iris just spoken of. So great participation of the aqueous membrane is, however, far from common in syphilitic iritis, in which, generally, exudation takes place from the free surface of that membrane only in sufficient quantity to attach parts of the edge of the pupil to the capsule of the lens, and perhaps cover, more or less, its contracted aperture. Very often, indeed, attachment of the edge of the pupil to the anterior capsule, at the situation of the most inflamed portions of the iris, is the only evidence of any morbid effusion whatever upon the free surface of the membrane of the aqueous humour; and the changes just described in the aspect of the iris itself are most frequently left open to view."

There is another appearance which is far from constant, but, whenever it is detected Mr. France thinks the syphilitic origin of the disease may be confidently asserted; this is "the occurrence of very minute dark-brown specks in the lower segment of the substance of the cornea: they appear circular in form, with well-defined margins, and their production seems independent of any general haziness or inflammation of the corneal structure; these characters mark them as quite distinct from those mottlings described by Mr. Wardrop as a consequence of aquo-capsulitis."

The ordinary aspect of the iris, under arthritic inflammation is, according to Mr. France, as follows:—

"Here, dullness of the anterior chamber is much more extensive and considerable; and if the disease be not quickly checked, the entire circle of pupillary margin is soon fixed by lymph, to the capsule of the lens; and even the whole area of the pupil may be thickly overspread with this effusion, which presents very generally a white or yellowish-white colour. The surface of the iris too will be found not *partially* discoloured in rusty-looking spots, but uniform in its alteration to a greenish or yellowish hue; a circumstance of considerable import, as contrasting with syphilitic discoloration: and lastly, whatever tumefaction of the iris there may be, and it is usually very slight, will be observed to partake of the same character, not being confined to a spot here and there, but general. The fact is, that in the immense majority of cases of arthritic iritis, the lining of the anterior chamber and serous covering of the iris are, in common with the sclerotic, the principal seat of the disease; and it is remarkable how closely herein it tallies with the recognized disposition of rheumatic inflammation in other regions to affect free membranous surfaces (as those of the synovial cavities and pericardium), and then give rise to abundant effusion, which is unknown as an accompaniment of rheumatism of fibrous and muscular tissue. Thus the large participation of the aqueous membrane in the inflammation called arthritic iritis, is manifested by copious effusion into its cavity, generally fibrinous, but sometimes serous; while the affection of the muscular structure is inferred only from its proximity, the contracted pupil, aching pain, and especially the exacerbation of that pain occasionally produced by the application of belladonna. Now, it is to the circumstance that syphilitic iritis, on the contrary, is, for the most part, essentially an inflammation of the parenchymatous structure, that the disease owes its peculiar character of producing tumefaction or thickening; and, in proportion as it departs from this type are the chief marks deemed diagnostic either ill-developed or absent. The tuberculation of the membrane, and its cinnamon discoloration, (which are merely the ordinary 'notæ inflammationis tumour et rubor' of Celsus, modified by texture and specific action,) are owing to this, and yet are commonly accounted for in just the opposite way; for the tubercles are generally regarded as attachments of lymph to the free surface of the iris, and their colour is ascribed to admixture of some extravasated red particles, or (as by Mr. Lawrence, who yet seems, with Beer, to recognize distinctly the interstitial origin of the tubercles), to the combination of the colour of lymph with that natural to the iris. Of these two suppositions, the former is certainly the more tenable; for a combination of the faint straw-colour of lymph with gray, blue, hazel, or brown, can never yield a tinge of red—one of the three primitive colours.

"When, however, a normal case of syphilitic iritis is examined closely in the earliest stage, it is clear to demonstration, that the irregularities of the surface of the iris are due to its proper substance being, at certain parts, swollen and infil-

trated, because the surface, though irregular in level, is continuous, and the confines of the swellings are lost insensibly in the surrounding comparatively healthy part: and if the case be attentively watched as the disease advances, it may, for a considerable time, remain equally evident that any morbid deposit there may be is interstitial. The tumefaction at one or more of these points, however, sometimes greatly increases, generally less in superficial area than in elevation; and though at first it barely rises above the surrounding level, it may eventually proceed to such extent, owing to the loose and distensible texture of the iris, as to constitute a tubercle, projecting high above the general plane, and sometimes even overlapping its own base. In the latter event, as also when a film of fibrin is effused over the surface of the tubercle, from sympathetic inflammation of the aqueous membrane (an occasional but not common circumstance), the real origin of the tubercle may be for a time obscured; yet, as it subsides at length, and the free lymph is absorbed, the natural reticular appearance of the anterior surface of the iris again comes into view, and the roots of the tubercle (so to speak) are seen to lie beneath that surface."

Eighteen cases are related in illustration of the various points which the author desires to establish.

With regard to the treatment Mr. France observes: "A more or less antiphlogistic course is naturally suggested as the cure for so decidedly an inflammatory disease as syphilitic iritis; experience, however, proves that the more powerful antiphlogistic means—venesection—is but very sparingly demanded; so seldom, indeed, that I do not remember an instance of its being resorted to at Guy's for this complaint. Perhaps in country districts this mode of depletion may be found necessary in full plethoric habits. The same mould of constitutional frame may demand it in metropolitan practice; but I much question whether, at the present time, our rural and civic labouring population really require that difference in the rigour of remedial measures which was formerly inculcated. I have, at least, no hesitation in deprecating that free resort to venesection, 'whenever there is feverishness' (whether the pulse be full and strong, or no) which has been recommended in this disease;—first, as needless for its cure; but, above all, as tending to produce or aggravate that irritable cachectic state, to which the syphilitic subject is especially prone. * * *

"Local depletion by cupping is, however, a remedy of the greatest service; it gives often immediate relief to the patient, at once mitigates his pain, and dissipates, in some degree, his obscurity of vision. Coupled with a brisk purgative, to clear the intestinal canal, it forms a nearly constant preliminary to the commencement of a mercurial course sufficiently decided to affect the mouth, or make the disease recede; and the practitioner may, of course, be well content if this latter should be even the only evidence of mercurial action upon the system. For mercury must not be administered in a set dose: it should in many cases be introduced into the system in the mildest form; while, on the other hand, in a more favourable constitution it may be exhibited with comparative freedom.

"The cases are numerous, in which the patient may be advantageously supported under, and shielded as it were, in a measure, from the injurious effects of the use of mercury, by the simultaneous employment of sarsaparilla, with or without the iodide of potassium—a combination no less valuable in this form of syphilitic disease, than in others where an irritable and vitiated constitution forbids the enforcement of so energetic a system of treatment as the local disease appears to demand. It is, in short, of infinite use when this malady arises in a cachectic individual; and it enables us then, if necessary, to diminish our dose of mercurial, and yet, retain good hope of effectually reducing the disease, and discharging the patient with improved health and preserved sight. The mercurial may be advantageously given in form of pill with the extract of hyoscyamus, which possesses this claim of preference to opium—that, in place of favouring a disposition to contracted pupil, which is one of the ordinary concomitants of the disease, it aids the belladonna externally applied in counteracting that morbid tendency. Chalk may, at the same time, be administered, to prevent any purging effect of mercury, which hyoscyamus is not equally calculated with opium to restrain.

"Conium, it is asserted, does not possess the power of causing dilatation of pupil in common with belladonna, hyoscyamus, stramonium, &c.; yet, in one case of

syphilitic iritis, in which the nurse had, by mistake, omitted the application of belladonna, I observed extreme dilatation follow its use in full doses combined with mercury; and I could not satisfactorily account for this phenomenon, except by ascribing it to the action of the hemlock.

"When the acuteness of the inflammation has been subdued, and the disease is quickly yielding, the dose of mercury at first requisite should be diminished. Small doses are, however, often needful for a long time after the disappearance of every external mark of inflammation, in order to remedy some slight visual defect—as a musca—which may continue to give annoyance to the patient. Its exhibition in this mild form is perfectly compatible with the administration of tonics and permission of a moderate diet, when deemed desirable.

"Blisters become available as soon as ever further local depletion by cupping is judged unnecessary; and inunction of blue and opium ointment to the temple and forehead, when pain about those regions is severe, very often produces the greatest relief.

"The oil of turpentine is certainly capable of exercising a controlling power over syphilitic iritis, more especially, according to Mr. Carmichael, who first recommended it, when the aqueous membrane is chiefly, or, at least, largely involved; —a set of cases, however, it must be recollected, which, in that very particular, depart from the normal type of the syphilitic disease." Mr. F. relates a case which "at once exhibits the beneficial action of the medicine upon the local malady, and the difficulty of preventing its unpleasant, and, if continued, injurious effects upon the kidney, which would probably entail more serious mischief upon the constitution, especially, if previously unhealthy, than the administration of mercury in full doses for three or four days, and its repetition, in alterative doses, combined with tonics subsequently. In one other case, where turpentine was employed under my observation for this disease, it was likewise necessary to discontinue it, in consequence of the disturbance it excited in the system; Mr. Carmichael, however, succeeded in warding off these morbid effects, and deriving the expected advantages from it.

"Differing in habit and character as syphilitic iritis does from arthritic, it is not surprising that they stand apart also as respects treatment. Less vigorous measures altogether are called for in the latter disease. Cupping is, indeed, generally necessary, but only to small extent. Mercury need not be given to affect the system; but as an alterative, or accompanied with saline purgatives and colchicum, to cause free action upon the bowels, it is, in the active stage, and to persons of moderate power, advantageous; while an early resort should be had to tonics with alkalies, the alterative dose of mercury being continued. Arthritic iritis is remarkable in its sensibility to the actions of belladonna and conium,—a peculiarity, I believe, first observed by Mr. Morgan. The application of the first is occasionally followed by so much suffering in the globe of the eye, mitigated on omitting, and renewed on reverting to the application, as to necessitate its discontinuance;—a circumstance before alluded to, and apparently depending upon the tension produced in the muscular fibres of the iris, which, in all probability, partake in some measure of the general rheumatic affection; for such effect of the use of belladonna appears to be confined to arthritic cases. Arthritic inflammation of the conjunctiva and cornea, as well as of the sclerotic, aqueous membrane, and iris, is sometimes remarkably under the influence of the extract of conium, given in doses of five or ten grains thrice daily, so that very serious inflammation of this kind will sometimes subside rapidly under its use; and it has, therefore, obtained with us a place among the remedies recognized as most eligible in this disease."

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## MIDWIFERY.

66. *On the Expulsion and Extraction of the Placenta before the Child, in Placental Presentations.* By J. Y. Simpson, Professor of Midwifery in the University of Edinburgh.—(*Prov. Med. & Surg. Journ.*, Feb. 5, 1845.) Professor Simpson believes that the data he has collected, now consisting of 135 cases, are ample enough to show—

1st. That the *complete* separation and removal of the placenta before the child is very seldom followed by any great hemorrhage.

2d. That, on the other hand, the previously existing hemorrhage almost always ceases from the moment the placenta is *perfectly* and *completely* detached from its connections with the uterus.

3d. That the cessation of the hemorrhage is explicable, not on the idea that the descending head of the child acts as a plug or compress upon the exposed orifices of the uterine sinuses, but on the mutual vascular economy of the uterus and placenta, and the circumstance that the hemorrhage principally comes from the partially detached surface of the latter.

4th. That the placenta may be, and ought to be, detached from its connections with the uterus in some varieties of unavoidable hemorrhage, and that these varieties are, for the most part exactly those in which our present recognized methods of treatment are most inapplicable and most unsuccessful.

5th. That under such circumstances the practice would, in all probability, be attended with much saving of maternal life.

6th. That this treatment has been in repeated instances accidentally followed with complete success, when had recourse to by midwives and others, under supposed mismanagement, and in defiance of the established rules of treatment in this special complication. And,

7th. In one very dangerous case, in which the previous hemorrhage was great, and continued in despite of the evacuation of the liquor amnii, and where the os uteri was imperfectly dilated, Prof. S. adopted, as a matter of principle and choice, the plan of separating and extracting the placenta, with complete success, the flooding immediately ceasing, though the child was not expelled for about two hours, and the mother recovering without one bad symptom.

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67. *Hemorrhage from an Ulcer in the Arm concurrent with Menstruation.*—The following very curious case is recorded by Prof. D'Outrepont, in the *Neue Zeitschrift fur Geburtskunde.*

The subject of the case was a female in labour with her fifth child, to whom the professor was called, and whom he safely delivered of a living, premature child. She stated that three years previously she had received a blow on the right arm, near the insertion of the deltoid, after which a scab was formed there. Having rubbed off this scab, hemorrhage from the place supervened, which continued for a whole day, and was then arrested by the application of a compressing bandage. She immediately experienced extreme discomfort, and removed the bandage. The hemorrhage was then renewed and continued during her whole menstrual period. After that a dark-brown, hard, thick scab formed on the wound, which fell off at each menstrual period, and the hemorrhage was renewed and continued each time as long as the menses. This coincidence occurred for two years and a half, when she became pregnant, and the menses as well as the hemorrhage from the arm was suppressed, and the crust on the arm became as large as a hen's egg. After labour the scab did not fall off. Lactation continued only three days, when the child died. The lochiæ continued three weeks. Three months afterwards with the recurrence of menstruation the scab fell from the arm, and the hemorrhage returned and continued during the menstrual flow; however, the scab became smaller after each hemorrhage, which equally diminished whilst the menstrual flow became more copious.

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68. *Delivery of Twins, whose heads were interlocked.*—Dr. Hedrick notices a case of this in the *Neue Zeitschrift fur Geburtskunde.* The body of the first child, which had presented the knees, had been delivered, and its head was retained by a second child, the head of which had descended with that of the first into the pelvis, which was very large. The umbilical cord of the first had ceased to beat. After some efforts the accoucheur succeeded in delivering both children. That which had been born with the body first could not be recalled to life, but the other lived.

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69. *Quadruple Births.*—An example of this is recorded in the *Northern Journal of Medicine,* (March, 1845,) by Mr. Black. The mother of the children was 32

years of age, of vigorous constitution, and had previously had six children, four males and two females, all uniparous. Her seventh labour commenced, according to her computation, at full term, Jan. 30th, 1845, at 5 A. M. At half-past seven two male children were born. After the birth of the second the pains ceased, and continued suspended until half-past one, when they recurred, and at two o'clock two female infants were expelled—the whole process occupying only nine hours.

The membranes of all the ova were ruptured artificially, and the proportion of liquor amnii discharged by each was as copious as is usually observed where the uterus contains but one ovum. There was no hemorrhage before delivery, during its progress, or after its completion. The placentæ, all of which were expelled almost immediately after the fourth infant, equalled, in the aggregate, the placentæ of three uniparous fœtuses. Three of them formed but one cake, and the fourth was distinct from these, but connected to them by a long process of the membranes. Each of the umbilical cords was as thick as we usually find the funis of the uniparous fœtus; and in one of them there was but a single artery, which was large.

The first male child presented the breech, and the second a foot; and the first female infant presented a foot, and the second the breech. The weight of the first male child was four pounds six ounces avoirdupois; and its length eighteen inches; and the weight of the second was four pounds five ounces and a half; the first female infant weighed four pounds seven ounces and a half, and its length was eighteen inches; and the second weighed four pounds three ounces, and in length measured seventeen inches. Both husband and wife are of a most amorous disposition, especially the former, who is three months younger than his wife and appears to be phthisical.

Another example of Quadruple Birth is recorded in *Oesterr. Med. Wochensch.*, No. 7, 1844. The mother was the wife of a peasant. She was 35 years of age, had been married at 24, and had had three sons and one girl. The husband was 36 years of age, emaciated and cachectic. The children were all male, presented the feet, and were born at intervals of half hours, the fourth excepted, which was born a quarter of an hour after the third, and was in a state of suspended animation. In each amniotic sac were about two pounds of liquor amnii, each placenta weighed about three quarters of a pound, and each fœtus between three and four pounds, and varied in length from fifteen to seventeen inches. The mother recovered perfectly in five days. All the children died within six days from their birth—two from some unknown cause, and the remaining two from neglect.

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70. *Obesity of the Umbilical Cord.*—Dr. Hamel read to the French Academy of Medicine, in February last, an interesting memoir on the development of the adipose tissue in the umbilical cord carried to such an extent as to interrupt the fœtal circulation by pressure on its vessels, and to occasion the death of the fœtus. This fatal accident, according to Dr. Hamel, is principally observed with women who pass suddenly from a state of extreme thinness to "embonpoint," under the influence of pregnancy, who live generously and take but little exercise. Women who, on the contrary, are lowered by privations, or live principally on vegetables, are exempt from this disease. According to Dr. Hamel, it is between the sixth and the eighth month of pregnancy that the death of the fœtus occurs. It is announced by a sudden uneasiness, occasional syncope, and the gradual cessation of the movements of the fœtus. As in abortion produced by other causes, the breasts become flaccid, the abdomen falls, and hypogastric pains are experienced. Generally speaking, however, women only become alarmed when the uterus being irritated by the decomposition of the fœtus, they begin to feel the first symptoms of abortion. Setting aside the symptoms which follow the death of the fœtus, there is no certain means of recognizing the state of the cord. The gradually increasing weakness of the fœtus, as indicated by the diminished strength of his motions, &c., is merely a symptom of debility which may be produced by many other causes. Having, however, seen abortion occur in many women who had, by an excess of good living, become very fat during pregnancy, and having found in these cases that the fœtus had died through obesity of the cord, Dr. Hamel draws the practical deduction that a great increase in the embonpoint of a preg-

nant female is dangerous to the fœtus, and should be prevented by an appropriate regimen.—*Lancet*, April, 1845.

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71. *Division of the Symphysis Pubis in certain cases of Obstructed Labour.*—In the *Northern Journal of Medicine*, for Jan. last, there is an interesting paper on this subject, by Dr. DAVID SMITH, of Glasgow. The following are the author's conclusions:

I. Craniotomy is, in all cases of obstructed labour, justifiable when the entire fœtus cannot be extracted through the pelvis, from deformity at the brim, from osseous and certain other tumours, and from great contraction of the outlet by the near approach of the tuberosities of the ischia to each other,—the obstruction being more than can be overcome by the forceps, *or other means*, yet not so much but that a mutilated fœtus may pass.

II. The Cæsarian section must be resorted to whenever the deformity is so great that a mutilated fœtus cannot be extracted through the natural openings; and for which operation symphysotomy can never be substituted.

III. Symphysotomy is only applicable to cases in which the delivery cannot be accomplished by the forceps, and would require that craniotomy should be performed,—the obstruction being dependent on the *funnel-shaped* form of the pelvis, and satisfactorily ascertained to be such that a slight increase to the contracted diameter would permit an entire child to pass; but in no instance would it be justifiable to resort to this operation if any uncertainty existed either as to the degree of deformity of the pelvis, or the vitality of the child.

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72. *Spontaneous Inversion of the Uterus.*—Dr. S. EDWARDS, of Bath, relates the following example of this in the *Lancet*, April 5th, 1845.

"J. C., æt. 24, of a weak leuco-phlegmatic temperament, and for some time previously in bad health, was taken in labour with her first child, Nov. 14, 1841. When seen by Dr. E. eight hours after the commencement of labour, he found on examination per vaginam, the os uteri 'about an inch and a half in diameter, thin, and extremely tense. The membranes were ruptured; passages well relaxed and lubricated; and the fœtus presented naturally in the third position, (*Naegele.*) The pains were of a feeble character, occurring every quarter of an hour, and had but slight effect upon the os uteri. A second examination was made two hours afterwards, when the 'os' had become relaxed and dilated, with the exception of the anterior segment, which still remained firm and prominent. The pains were stronger and more frequent, and the patient, against my repeated requests, made use of the most powerful voluntary efforts in conjunction with them. The labour went on satisfactorily to the birth of the child. It having been separated, I placed my hand upon the abdomen of the patient, and the uterus was found firmly contracted. The insertion of the cord into the placenta could not be felt; and from the distended state of the vessels of it, I felt convinced the placenta was still attached. I consequently sat down by the bed-side, awaiting the return of uterine action, and about seventeen minutes after the birth of the child, a violent expulsatory effort was made. Deeming the after-birth was being thrown off, I proceeded to examine, but was surprised to find, on approaching the genitals, a large tumour, of a pyriform shape, the base downwards, of the size of a child's head of six months old, lying between the thighs of the mother, of a soft, compressible, and yielding nature, and covered with a slimy, grumous matter. The sensation it communicated to the finger was vastly different to that of a placenta; and on rapidly tracing my fingers around it, and arriving at the left side, and somewhat posteriorly, came to the placenta, still partially attached, whilst that part of the womb from which the placenta was detached *was pouring out blood in great violence.* The case could not be mistaken. To return the uterus immediately appeared of vital importance; and the first thought that presented was,—shall I reduce the organ with the placenta adhering? Now the partial manner in which it was adhering, and the conviction, from its large size, that its removal would greatly facilitate the reduction of the uterus, I at once determined upon the prior detachment. This being readily accomplished, I grasped the uterus, with the intention of reducing it by causing the reversion to commence at the 'os,' and terminate at the 'fundus;' but this, owing to its soft and flabby state, I could not perform, and consequently employed my bearing on the latter (paying attention to the axes of the pelvis), carry-

ing it up before my hand. On arriving at the brim of the pelvis, the fundus shot up, as it were, from my hold to its proper situation, the neck, mouth, and superior part of the vagina following. I carried my hand, however, forward, to make sure of its complete reduction, when its irritation produced a smart contraction, and expelled the hand from its cavity. The uterus remained contracted perfectly a few minutes, when I applied a firm bandage and compress.

"The shock to the nervous system had been great, Mrs. C—— during the whole time having been in a complete state of syncope; pulse imperceptible; clammy perspiration and vomiting every few minutes; but on the reduction, and from the administration of stimuli, she somewhat rallied. In about fifteen minutes, symptoms of internal hemorrhage came on, the prostration of the vital powers as great as before. I removed the bandage, and the cold effusion being employed, the hand introduced into the cavity of the uterus, and the coagula removed, it again contracted. Ergot of rye with ammonia was then administered, and repeated twice or thrice with decided advantage. For about an hour the uterus continued alternately contracting and dilating, but was controlled by the firm and constant pressure of the hand through the parietes of the abdomen, which in such cases, experience has taught me, is more to be trusted than the bandage and compress. For upwards of five hours the poor creature continued in a state of fearful lipothymia, notwithstanding the copious use of stimuli of various kinds, after which time she rapidly rallied, and was only disturbed by a hacking cough of that peculiar kind not unfrequently seen after severe hemorrhage.

"In the after progress of this case nothing occurred of note, with the exception of slight pain and tenderness over the uterine region, which, however, disappeared on the third day from confinement, and those numerous little symptoms usual in severe cases of flooding, and which it is deemed unnecessary to detail here."

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73. *Presentation of the Shoulder in six consecutive labours in the same woman.*—Dr. Walter, Prof. of Midwifery at Dorpat, has recorded in the *Neue Zeitschrift fur Geburtskunde*, 1844, a case in which the shoulder presented in six successive labours in the same woman. An attentive examination of her pelvis revealed no other anomaly than an unusual width at the hips.

M. Gery, it will be remembered (see No. of this Journal for October 1843, p. 494) has recorded a case of arm presentation in nine consecutive labours.

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74. *Absence of the Chorion.*—Dr. Hedrich states in the *Neue Zeitschrift fur Geburtskunde* that in a case of Cæsarian section performed after the death of the mother, no trace of chorion could be discovered though the most minute researches were made for it.

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75. *Reproduction of the Liquor Amnii.*—Dr. Hedrich relates in the *Neue Zeitschrift fur Geburtskunde* the case of a woman in whom the liquor amnii was discharged six weeks before term. Her abdomen was so soft and its parietes so flaccid that the parts of the fœtus could be distinguished through them. The water was reproduced before delivery, which took place at full time.

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76. *Utero-gestation protracted to the three hundred and ninth day.*—Dr. Hedrich mentions in the *Neue Zeitschrift fur Geburtskunde*, the case of a woman, a primipara, who was delivered the three hundred and ninth day after coitus.

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77. *Remarkable case of Delivery during sleep.*—M. Schultze was called on the 25th of May, 1844, to attend the wife of an artizan, who had reached the full term of her fourth pregnancy. He found her lying in a state of profound somnolency, so that it was quite impossible to rouse her, either by violently shaking her or by applying to her nostrils the most powerful stimulants, such as ammonia and ether.

On the third day of this unnatural sleep, the woman, without awaking, was delivered of a healthy, living, and well-formed male child. On visiting the female the following day, M. Schultze found that she had not long spontaneously awakened from her sleep; and as she had no recollection of her delivery, she was somewhat astonished to find that the child had been born without her having been aware of it.—*Lond. Med. Gaz.*, May, 1845, from *Annales D'Hygiène*, Jan., 1845.

## MEDICAL JURISPRUDENCE AND TOXICOLOGY.

78. *Remarkable Suicide.*—I find the following quoted from the *Gazette Médicale de Paris*, but from the name of the reporter, suppose that it may be an English case.

Mr. Jameson was called to a female, fifty years old, who had cut her throat with a razor. While attempts were made to staunch the wound, she drew something from her pocket, to which she endeavoured to attract their attention by signs, being unable to speak. Mr. Jameson took it out of her hands, and found it to be a considerable portion of the walls of the respiratory tube. It consisted of the cricoid cartilage entire, of the left wing of the thyroid, of the right arytenoid, of a part of the upper rings of the trachea and some fibres of the muscles of the larynx. The unfortunate female stated by signs, that the mutilation was committed by herself and that she had made five several attempts before she completed it. She survived 34 hours.

It is observed that if this female had died without any one being present to note the circumstances, they would unavoidably have induced a strong suspicion of homicide. How many would have credited the assertion, that she had herself completed the horrid dissection and then removed the parts to her pocket.

T. R. B.

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79. The *Umbelliferous Narcotics.*—In a communication to the Royal Society of Edinburgh, Dr. Christison proceeded to relate a series of experiments instituted by him with a view of determining the influence of season on the activity of the poisonous narcotic plants of the family *Umbelliferæ*.

The plants belonging to this family are for the most part aromatic and stimulant and destitute of poisonous properties. In four species only, have narcotic properties been unequivocally recognized, viz. *Conium maculatum*, *Œnanthe crocata*, *Cicuta virosa* and *Æthusa cynapium*, but these are universally held to be highly energetic.

1. *Conium maculatum*, Common Hemlock. No accurate information is yet possessed as to the influence of season on the activity of this species, for all investigations on the subject are vitiated by the uncertain strength of its preparations and the ignorance which prevailed till very lately as to the conditions required for securing their uniformity. The author has found by experiment, as Professor Geiger had already been led to conclude, that every part of the plant is poisonous, both the root, the leaves and the fruit, and that the root is least active, the leaves much more so, but the fruit the most active of all. The root is commonly held to be most active in midsummer, when the plant is in full vegetation and coming into flower, but this belief is founded only on a single and not altogether conclusive experiment made by Professor Orfila. This author found this part of the plant to be so feeble at all times, that its respective energy at different seasons could not be satisfactorily settled. The expressed juice of twelve ounces of roots had no appreciable effect on a small dog in the end of October, or towards the close of June; but an alcoholic extract of six ounces in the beginning of May killed a rabbit in thirty-seven minutes, when introduced into the cellular tissue. The leaves are commonly thought to be most energetic when the plant is coming into flower in midsummer, and to be very feeble while it is young. The author finds it to be probable, that the leaves are very active in midsummer; but he has likewise observed that they are eminently energetic in the young plant, both in the beginning of November and in the month of March, before vegetation starts on the approach of genial weather. Thirty-three grains of a carefully prepared alcoholic extract, representing one ounce and a third of fresh leaves, killed a rabbit in nine minutes, when introduced into the cellular tissue. The fruit is most active, when it is full grown, but still green and juicy. It then yields much more of the active principle *coma*, than afterwards, when it is ripe and dry. The author added, as a fact contrary to general belief, that he had found the ripe seeds of hemlock and an alcoholic extract of the leaves, to sustain no diminution of energy by keeping, at all events, for eight years.

2. *Œnanthe Crocata*, Dead-tongue. This species is universally considered to be the most deadly of all the narcotic *Umbelliferæ*. Many instances of fatal poisoning

with its roots have been published during the last two centuries, in the various periodicals of Europe. It has repeatedly proved fatal in two hours, and a portion no bigger than a walnut has been thought adequate to occasion death. Fatal accidents have occurred from it in England, France, Holland, Spain and Corsica. The root would seem from these cases, to be the most active part; but few observations are on record as to the effects of the leaves and none as to the fruit. The root appears from these cases to be very active in all seasons, at least in the beginning of January, the end of March, the middle of April, the middle of June and the middle of August.

The author proceeded to inquire carefully into the effects of season upon this species as it grows wild in the neighbourhood of Edinburgh, but was surprised to find that every part of the plant in this locality is destitute of narcotic properties at all seasons. The juice of a whole pound of the tubers, that part which has proved so deadly elsewhere, had no effect, when secured in the stomach of a small dog, either in the end of October, when the tubers are plump and perfect, but the plant not above ground, or in the month of June, when it was coming into flower; and an alcoholic extract of the leaves and that prepared from the ripe fruit, had no effect whatever, when introduced into the cellular tissue of a rabbit, under the same condition, in which the common hemlock acts so energetically. By a comparative experiment he ascertained that tubers collected near Liverpool, where one of the accidents alluded to above happened in 1782, act with considerable violence on the dog, and he briefly noticed some experiments, made at his request, by Dr. Pereira, with the Œnanthe of Woolwich, showing that there also it is a powerful poison to the lower animals. Climate seemed to the author to furnish the only adequate explanation of these extraordinary differences, yet the plant grows in all parts of Scotland with great luxuriance.

3. *Cicuta Virosæ*, Water Hemlock. This species has also been held to be a deadly poison ever since an express treatise on its effects was published by Wepfer in 1716, and repeated instances of its fatal action have been observed since and some of these very recently, in Germany. The root is the only part which has given occasion to accidents; it has proved fatal in two hours and a half. Nevertheless, this plant too seems innocuous in Scotland, or nearly so, although, like the last species, it grows with great luxuriance. The juice of a pound of the roots collected in the end of July while the plant was in full flower, produced no narcotic symptoms, and the only effects observed, namely, efforts to vomit, might have arisen from the operation which is necessary to secure the juice in the stomach. An alcoholic extract of the leaves collected at the same time, and a similar preparation made with two ounces of the full grown seeds, while still green and juicy, had no effect whatever when introduced into the cellular tissue of a rabbit, except that inflammation was excited, when the extract was applied.

4. The author has not yet had an opportunity of trying the effects of the fourth species, *Æthusa Cynapium* or Fool's Parsley. *Edinburgh New Philosophical Journal*, April, 1845. T. R. B.

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80. *Ergoted Bread.*—At a meeting of the Academy of Sciences of Paris held December 16, 1844, M. Bonjean gave an account of two instances in which spontaneous gangrene was induced from eating ergoted rye bread. One subject was ten years old, and in this case, it was necessary to amputate both legs; the other, twenty-eight months old, lost the right leg by spontaneous separation. Both survived this severe mutilation. Other members of the family who had partaken of this food were indisposed, but no serious consequences ensued.

On the 13th of January, M. Bonjean made an additional communication. The oldest child was dead. On dissection, the brain and its meninges were found healthy, but the meningeal veins were much distended. There was about a coffee cup full of serum in each ventricle. The right lung was inflamed, with an abscess externally. The left lung also pneumonic. The liver was healthy. The veins of the stump were healthy, but its arteries were obliterated and converted into a fibrous cord for an inch. No other alterations could be observed.

The other child, 28 months old, was doing well. The cicatrix arising after the spontaneous separation, was nearly healed. T. R. B.

81. *Doubtful case of Concussion of the Brain from external injury.*—(*British American Journal of Medical and Physical Science*, No. I.)—The following is one among a thousand instances of uncertainty as to the effects of injuries to the head.

While playing on the 17th of December, 1841, P. C., aged twenty-one years, received what was described as a very slight blow on the left side of his head, from the open hand of one of his companions, which staggered him for a moment, but he was soon able to walk home to his house, a distance of one hundred and fifty yards. Dr. David saw him five hours after the accident—he was then seated in a chair, but appeared quite restless, although he could answer coherently. His pulse was full, but not quick, and no trace of external injury could be discovered. As he had been costive, a cathartic was ordered, with cold applications to his head. He was seen again the next day, and was found walking about, and apparently quite well, and did not complain of any pain. The medicines prescribed had acted powerfully. In the night, Dr. David was again suddenly called to him: he was insensible, incoherent in his language, the pupils were dilated and unaffected by light, and his hands extended, endeavouring to get hold of imaginary objects before him. There was also a shivering, which lasted about an hour, after which he became sensible and complained only of intense pain over both eyebrows. He was bled to syncope, and ordered repeated doses of calomel, with castor oil, under which treatment he became much better, till the morning of the 21st, when he suddenly became comatose, and died within eight hours.

On dissection, fourteen hours after death, no fracture of the skull, nor engorgement of the cerebral vessels, nor any effusion under the membranes could be found, but on cutting into the substance of the brain, and laying open the ventricles, they were found distended with at least six ounces of limpid fluid, and with the exception of the septum lucidum, which was soft and easily torn, there was not the slightest appearance of inflammation to be found in the ventricles, or, indeed, any other part of the brain, which was firm, and perfectly healthy.

"I assured the friends, (says Dr. David) that the morbid appearances were not the result of the blow the man had received three or four days before his death, but the result of some latent disease which had been going on for months before he received the injury." But had there been no dissection, the consequences would doubtless have been attributed to the blow. T. R. B.

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82. *Raciborski on the Nature of the Corpora Lutea, and the difference in their appearance, according as the expulsion is followed or not by conception.*—The following results were announced by him to the Royal Academy of Medicine, October 15, 1844.

1. The corpora lutea are produced by an hypertrophy of the granular substance, which lines the internal membrane of the Graafian vesicle. 2. The transformation of this substance commences as soon as the ovule arrives at maturity, and the vesicle is then prepared to break and give passage to it. 3. As soon as the Graafian follicles burst, the transformation develops rapidly. But an important distinction occurs. If the ovum has been expelled spontaneously (as after every menstrual period or the epoch of the rest) the granulations increase in number and size, under the form of a thin yellowish membrane, adherent to the membrane of the follicle, and in the cavity which it forms, a small clot of blood is to be found. If, on the contrary, in the female, conception coincides with the expulsion, the elements of the granular tunic increase so much in size and number, that in a little time, they form a voluminous mass, which fills the whole cavity of the follicle. And it is difficult to discover in the centre of this yellow mass, a small space filled with a whitish, fibrinous tissue, which seems to be the former cicatrix shrunk by the hypertrophy pressing on it. 4. In all females delivered at the full time, corpora lutea of this description exist. But it is remarkable how soon they decrease and are atrophied, after delivery. Thus a corpus luteum which on the third day was eight lines in diameter, was only five lines on the tenth, and in three months after, hardly one line, and almost colourless. 5. It is thus easy to ascertain on inspection, whether the ovum has been expelled spontaneously, or is followed by conception.—*Bulletin de l'Academie Royale de Medecine*, October, 1844. T. R. B.

83. *Case of Death from Rupture of the Splenic Vein.* By Dr. Miling.—A. A., 26 years of age, of great muscular strength, laid a wager that he would perform a certain piece of work with a shovel or dung-fork, in the farm-yard, in the course of two hours. He had almost completed the work, and won the wager, when he began to complain of pains in the bowels. He drank several glasses of brandy, and went on with his labour; but the pain in the abdomen increased, he was seized with a violent shivering fit, and had to be carried to bed, where he fainted. He was ordered a dose of castor oil, and an oily emulsion. In the evening he still complained of a feeling of chilliness, of pains in the belly, and a disposition to vomit. His belly was very much distended, and painful on pressure; pulse extremely small and contracted; countenance sunken, with the expression of deep suffering. He was bled, but syncope supervening, the vein had to be stopped. Twelve leeches to the belly, and repeated clysters were prescribed, the patient not having yet had any opening from the bowels. These means having remained without effect, he was put next morning into a warm bath, and felt himself relieved, but the distension of the belly went on increasing. He now became excessively anxious; he had long fits of shivering, cold extremities, clammy sweats, hiccough, and facies hippocratica. In the afternoon, having requested to have another warm bath, he was put into it, but within five minutes he was taken out dead.

The body was extremely pale; the abdomen distended to bursting. As soon as the abdominal parietes were cut through, an interminal stream, as it appeared, of fluid blood flowed from the opening, so that the room immediately became inundated with it. All the blood having at length drained off, the viscera, liver, spleen, bowels, &c., presented themselves without a trace of inflammation. After a long search, Dr. M. at length discovered a rent, several lines in length, in the splenic vein, from which the fatal hemorrhage into the abdomen had taken place.—*Medicinische Zeitung*, No. 8, 1844.

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84. *Concealed Pregnancy and Delivery, with suspected Child-murder.*—All that remained of the body of the child in this case was one or two convolutions of the small intestines filled with meconium; the remainder of the body had been devoured by a dog. The statement of the prisoner was as follows:—That she had had connection with one of her father's servants once only about seven months previous to her delivery; that she menstruated once sparingly after connection; that at one A.M., she was seized with labour pains, and delivered in about an hour thereafter of a child, which appeared small and premature; that she divided and tied the cord, and hid the body in the straw of the bed; that during the following day she went about her work in the house and the field as usual; that at two P.M., the placenta came away about the size of the fist, and that she then buried the child. Among other questions raised by this case, it was asked whether, from the appearance of the intestines presented for examination, and from an inspection of the mother, any inferences could be deduced with regard to the truth of her statement as to the immaturity and non-vitality of the child? To this the following answer was given:—The only portion of the child presented for inspection is a piece of the small intestine about ten inches long; the mucous membrane is already putrid; the smooth, white, thin and almost transparent appearance of the muscular coat, the thinness of the serous tunic, the absence of fat in the mesentery, and the distension of the intestine with meconium, give tolerably strong grounds for the belief that the fœtus was only of seven or eight months' gestation. This supposition is strengthened by the very trifling relaxation of the maternal genitals; the very slight marks of delivery; by the distension of the abdomen not having been sufficient to be observed by others; and by the delivery having been almost without pain. It is not probable that the child was born alive, but this fact cannot be ascertained with certainty. The presumption is, the mother did not wish the child to die, as she tied the cord.—*Northern Journ. of Med.*, May, 1845, from *Henke's Zeitschrift fur die Staatsarzneikunde*, No. vii., 1844.

## HYGIENE.

85. *On the Preservation of the Health of those who work in Lead.*—M. GENDRIN has recently published in a French journal (*La Presse*) an article on the preservation of the health of those who work lead, and its various preparations, which we think sufficiently important to warrant our laying it in full before our readers.

"The morbid symptoms which ruin the health and endanger the life of those who labour in manufactories of carbonate of lead and of minium, are shared," says M. Gendrin, "by all whose occupations lead them to employ lead and its preparations. More than forty professions are attended with danger to those who follow them, from this source. Among them the most dangerous are those in which are prepared the chemical products, of which lead is the basis; such as manufactories of litharge, of carbonate of lead, of minium, of oxide of lead, establishments in which lead in the metallic state is worked, (those for the fusion of lead for the manufacture of shot, and of printing types,) works for the vitrification of the oxide of lead, (potteries, china and crystal works,) trades in which the salts of lead are used, (house painting, black dying of horsehair stuffs, glazing of visiting cards,) &c. &c. In all the establishments devoted to these purposes, most of which are on a very extensive footing, a large number of workmen are exposed to the action of a great quantity of poisonous matter, volatilized in a state of impalpable dust, or vapourized, or dissolved in fluids.

"Thus brought in contact with the absorbing surfaces of the economy, the poison acts with the greatest possible energy, owing to the activity of the tegumentary functions, exaggerated by labour and by the elevated state of the temperature. Thence it is that we see the unfortunate beings whom want of work in other professions throws into these, obliged to cease their labours after a few weeks, and forced to enter the hospitals suffering from the most serious symptoms. Unfortunately for them, the violent abdominal pains which constitute the principal symptom of poisoning by lead, are always followed by extreme debility, and often by incurable paralysis. In some instances, happily rare ones, those who work at the preparation of minium are attacked with epileptic symptoms, which either terminate in death or leave the patients in a state of insanity, or of cachectic debility, which, generally speaking, our art cannot remedy.

"In the presence of so great an evil, it becomes a duty for all medical practitioners to unite their efforts to attenuate and to prevent the disastrous effects of poisoning by lead. It is this duty which I accomplish," continues M. Gendrin, "in making known the result of fourteen years' experiments respecting the treatment of saturnine diseases, continued without interruption in the medical divisions of the hospitals, the Hotel Dieu, Cochin, and La Pitié, entrusted to my care. I do not hesitate to say, with a feeling of deep conviction, that nearly all saturnine diseases may be cured, rapidly and securely, by an easy and cheap remedy; and, the most important point of all, that the occurrence of saturnine affections may be prevented.

"Whatever may be its gravity, unless it be complicated by cerebral symptoms lead colic may be always cured by the ingestion alone of sulphuric acid, in the dose of from a drachm and a half to two drachms, mixed with about three pints of water, for the four-and-twenty hours. The cure takes place in six days, on an average, if the disease is extreme; in three days, if it is slight.

"Whenever the skin of the patient is covered with a layer of lead, as is the case with nearly all the workmen who come out of workshops in which large masses of the metal are operated upon, to the sulphuric acid, administered internally, must be added the external use of sulphurous and soap baths, the cleansing action of which is increased by the detersive action of frictions performed with a brush.

"The nervous and cerebral symptoms only occur, generally speaking, when the patient has already suffered from several saturnine affections inefficiently treated. If they manifest themselves at the first attack, it is because the skin is covered by a layer of metallic powder which keeps up permanent poisoning of the system. Even in these cases, which are the most difficult to manage, if the disease is attacked in time, by insisting longer on the sulphurous and soap baths, a cure is effected in from eight to ten days on an average. The constant efficacy of this

simple treatment is to be explained by the conversion into an insoluble, harmless salt, (the sulphate of lead,) of the mineral poison absorbed, and by the ablation of the particles of lead deposited on the tegumentary surface.

"The preservative treatment is based on the same principle. In order to preserve workmen from saturnine affections, the following precautions must be adopted:—Two glasses of the sulphuric lemonade must be drank each day; the parts of the body which are uncovered during labour must be washed with soap and water at each cessation from work; the workmen must have clothes on purpose to work in. Those who are employed in localities where the atmosphere is loaded with a great quantity of metallic dust, or poisonous vapours, ought, also, to take two general soap baths each week, scrubbing the body with a flesh-brush. The omission of these precautions during six or eight days, or even during two or three, if the workman commits excesses in drinking, is often sufficient to allow the symptoms of poisoning to appear. Thence the necessity of continuing for some time the use of the sulphuric lemonade and the soap lotions, even after ceasing to work at lead. Sulphuric lemonade may be thus taken without any injury to the health. The work people of the manufactory of carbonate of lead of Clichy have taken it during two years and a half, without experiencing any ill effects whatever.

"No one need be surprised," says M. Gendrin, "that I should speak with confidence, even with authority, on the subject. What I have above stated is merely the interpretation of facts. Since 1831, I have thus treated between four and five hundred cases, all of which have been carefully taken down by my house physicians, nearly all of whom are now in practice, and have adopted my practice, as have also many other enlightened physicians at home and abroad. M. Roard, the learned chemist, who is at the head of the manufactory of Clichy, (the principal manufactory in Paris for the carbonate of lead,) has made his workpeople use the sulphuric lemonade during two years and a half. This precaution alone has enabled some of them who had previously been attacked several times by lead colic, to work during six months without intermission, and without experiencing the slightest indisposition. The inspectors and workpeople of various other establishments have likewise owed the preservation of their health to the adoption of these precautionary measures.

"The general adoption of the treatment which I recommend would be attended with great advantages. It would, firstly, preserve the health of men whom poverty alone, generally speaking, compels, in order to give bread to their families, to devote themselves to occupations which only reward them with disease, infirmities, or death; secondly, the manufacturers would find as many labourers as they wished, who, being able to remain for a considerable length of time at their occupations, would acquire a thorough knowledge of the manipulations in which they are engaged, a knowledge which they now seldom, if ever, possess. How is it possible to have workpeople well acquainted with the various manipulations required in establishments of this kind, when, either from actual disease, or from the fear of it, they seldom remain in them more than a fortnight? If the workshops were to cease to be unhealthy, the work would be better executed, the price of labour would diminish, and the products would be more abundant. The preservative measures which I have pointed out are attended with but very trifling expense. Sulphuric acid and soft soap are so cheap, that an exceedingly small outlay would meet the expense incurred. In large establishments, the water furnished by the steam-engine, which is generally wasted, might be used for baths.

"In addition to the remedial and preservative measures which I have recommended, there is still much to be done to preserve those who work lead and its preparations, by mechanical precautions. Is it not deplorable, for instance, that the sieves for minium, and the mills for the carbonate of lead, should still, in many establishments, be moved by hand?

"My task is now fulfilled. I have proved that we possess the means of putting a stop to a great evil. A general administrative law is wanted; and it is the duty of a government to adopt those measures which are calculated to preserve the health of the population entrusted to its care."—*Lancet*, May 31st, 1845.

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86. *Health of Workmen in Tobacco Factories.*—M. MELIER read a report to the French Academy of Medicine, April 22d last, on an official communication from

the Minister of Commerce respecting the health of workmen employed in manufacturing tobacco.

M. Melier first drew attention to the great diversity of opinion that existed among physicians as to the influence of manufacturing tobacco on the health. According to Rammazini, no occupation could be more dangerous; according to Parent Du Chatelet, it was completely innocuous. The perfect organization of every department of the royal manufactories of tobacco in France afforded an opportunity of ascertaining which of those two opinions came nearest the truth. Every, the minutest detail in those institutions was accurately known and noted, and physicians were attached to each factory, who, in addition to superintending the sick, made yearly reports, specifying particularly the state of health of the workmen, the particular diseases with which they were affected, and any peculiarities that those diseases presented.

The document communicated to the Academy consisted of the reports for the year 1842, made by the physicians of ten tobacco factories. According to those reports, tobacco seldom produces any prejudicial influence on the health of the workmen; two stages only of the processes, that in which snuff is fermented, and that in which tobacco for smoking is dried, exert a slight influence on the workmen. The reports even go farther, for the physicians of those establishments seem inclined to think that being employed in manufacturing of tobacco is prophylactic, and even curative in certain diseases, especially in phthisis. The importance of those questions, especially of the latter one, is obvious; with a view to their solution, M. Melier repeatedly visited many tobacco factories, chiefly those in Paris, as being the most important of all, and now gave a rapid view of the various processes conducted in them.

In a hygienic point of view those processes may be classed into two categories, according to the state of the plant, particularly whether it is operated on before or after it has been subjected to heat and fermentation—two conditions which greatly favour its activity.

Notwithstanding that steam has replaced manual labour in those factories wherever it has been found practicable, and that the workmen are thereby guaranteed from many inconveniences to which they were previously subjected, still, according to M. Melier, the manufacture of tobacco is by no means exempt from exerting a prejudicial influence on the workmen, and indeed it would be difficult to conceive how it could be otherwise, when we recollect the composition of the plant, that it contains *nicotin*, one of the most violent poisons. Many of the workmen experience its effects. Its primary effects are characterized by headache, more or less intense, accompanied with nausea, loss of appetite and of sleep, and diarrhœa: those symptoms last from eight to fifteen days, and then usually disappear. The consecutive effects of the poison are manifested by a peculiar alteration of the complexion, which assumes a grayish tinge. This latter effect has been observed in but a few workmen after a very considerable period, and in certain factories only. M. Melier supposes that it is connected with a peculiar state of the blood, arising from the absorption of the principles of the tobacco. This opinion he supported by several considerations. He caused the urine to be analyzed by M. Felix Boudet, and there is every reason to suppose that it contained nicotin.

The effects of tobacco are then far from being so injurious as was formerly supposed; no determinate disease is produced, but it exerts the physiological effects that might be anticipated from its composition. Does tobacco exert any salutary influence to compensate for its injurious effects? If such were the case, there would be nothing contradictory in the fact, for most of our therapeutic agents owe their salutary virtues and poisonous power to the same elements. It would seem that the emanations from tobacco are occasionally salutary. The workmen are convinced of their efficacy in rheumatic pains. If those pains have been contracted after a chill, they know of no better remedy than a good sleep on a heap of tobacco. In connection with this point, M. Melier referred to a series of cases communicated to him by Dr. Berthelot, from which it would appear that a cataplasm, made of linseed meal and decoction of tobacco, promptly assuages rheumatic pains, and effects a cure on the average as quickly as any of the modes of treatment commonly used in that disease.

The manufacturing of tobacco seems calculated to preserve the workmen from

intermittent fevers, and also from being attacked by certain epidemics; it also is prophylactic against itch. Is working in a tobacco factory a preservative from phthisis, or does it retard the progress or effect the cure of that disease? M. Melier could not discover any facts that warrant an affirmative answer to those questions, while he knows of some which go to negative them.—*Dub. Med. Press*, May, 1845, from *Gaz. Méd. de Paris.*

## MEDICAL STATISTICS.

87. *Statistics of Tubercles.*—In five hundred *post-mortem* examinations, carefully made by Dr. Cless, of Stuttgard, one hundred and seventy-six were in tubercular subjects, the greatest number of which died with symptoms of phthisis. Very few affected with tubercles died of other diseases. He endeavours to solve the two following questions:—

1st. What influence has age on the development of tubercles?

2d. What connection is there between tubercular affections and mortality in general?

In the subjoined table the sexes are blended together till the age of fifteen. The number of phthisical females is less than that of males; which may depend upon particular circumstances in the hospital, but generally speaking, at Stuttgard, there are more consumptive men than women:

| Age | Tubercular. Male | Fem. | Tot. | Non-Tubercular. Male | Fem. | Tot. | Total. Male | Fem. | Tot. | No. of Tubercular subjects in one hundred deaths |
|---|---|---|---|---|---|---|---|---|---|---|
| Under one year | | | 3 | | | 47 | | | 50 | 10 |
| One year | | | 3 | | | 7 | | | 10 | |
| From 2 to 5 years | | | 11 | | | 6 | | | 17 | 64 |
| " 6 to 9 " | | | 2 | | | 3 | | | 5 | 50 |
| " 10 to 14 " | | | 8 | | | 7 | | | 15 | |
| " 15 to 19 " | 6 | 1 | 7 | 11 | 15 | 26 | 17 | 16 | 33 | 21 |
| " 20 to 24 " | 17 | 6 | 23 | 31 | 29 | 60 | 48 | 35 | 83 | 27 |
| " 25 to 29 " | 25 | 4 | 29 | 14 | 15 | 29 | 39 | 19 | 58 | 50 |
| " 30 to 30 " | 36 | 6 | 42 | 22 | 19 | 41 | 58 | 25 | 83 | 50 |
| " 40 to 49 " | 15 | 4 | 19 | 16 | 10 | 26 | 31 | 14 | 45 | 42 |
| " 50 to 59 " | 10 | | 10 | 22 | 14 | 36 | 32 | 14 | 46 | 21 |
| " 60 to 69 " | 5 | 1 | 6 | 14 | 13 | 27 | 19 | 14 | 33 | |
| " 70 to 79 " | 2 | 1 | 3 | 7 | 5 | 12 | 9 | 6 | 15 | 18 |
| " 80 to 90 " | 1 | | 1 | 2 | 4 | 6 | 3 | 4 | 7 | |
| | 117 | 23 | 167 | 139 | 124 | 333 | 256 | 147 | 500 | |

The youngest of the three infants under one year, was eighteen weeks old; both lungs, the bronchial glands, and the spleen, were choked up with crude miliary tubercles. The second, aged seven months, besides numerous tubercles, had three large cavernous excavations. In the third, aged eight months, the tubercles, very numerous in both lungs, in the bronchial glands, and spleen, had attained the size of a pin's head, and even of a pea.

This table confirms that which was previously known: that the greatest frequency of tubercles is observed in infancy; in fact, in thirty-seven children, from two to fourteen years, twenty-one were tuberculous, and in sixteen subjects only were no tubercles discovered.

These observations of M. Cless, although having reference merely to a small number, are very important, inasmuch as they have been made in civil practice.

Towards puberty the mortality of tuberculous subjects notably diminishes, again to become greater after this period, and to decrease afresh after 40 years. Subjoined is a comparative table:—

| | In 100 Deaths from Phthisis. Cless. | Louis. | Boyle. | Clark. |
|---|---|---|---|---|
| From 15 to 20 years | 5 | 8 | 10 | 9 |
| " 20 to 30 " | 37 | 31 | 23 | 28 |
| " 30 to 40 " | 30 | 27 | 23 | 24 |
| " 40 to 50 " | 14 | 18 | 21 | 18 |
| " 50 to 60 " | 7 | 9 | 15 | 10 |
| above 60 " | 7 | 4 | 8 | 7 |

To resolve the second question, M. Cless has taken for his basis the work of Hoffmann, on the mortality in Prussia, from 1820 to 1835. The first column indicates the proportion of individuals in 10,000, who died at different periods of life, not including the still-born; the second indicates the number of individuals

in whom tubercles were discovered; and the third, the proportion in which, according to their ages, one thousand tuberculous persons died:—

| | In 10,000 deaths. | Tuberculous. | In 1000 Tuberculous there died |
|---|---|---|---|
| Under 1 year | 2494 | 50? | 20 |
| From 2 to 14 years | 2399 | 1200 | 456 |
| " 15 to 19 " | 255 | 60 | 23 |
| " 20 to 29 " | 549 | 200 | 76 |
| " 30 to 39 " | 565 | 280 | 106 |
| " 40 to 49 " | 660 | 270 | 103 |
| " 50 to 59 " | 814 | 170 | 64 |
| " 60 to 69 " | 1022 | | |
| " 70 to 79 " | 843 | | |
| " 80 to 89 " | 348 | 400 | 152 |
| above 90 " | 51 | | |
| | 10,000 | 2620 | 1000 |

According to this table the number of children who died from tubercles, compared to other children, who died at the same age, is very surprising. At the age of puberty the mortality in general, as that of the tuberculous, was extremely low. It results from the third column that half of the phthisical individuals died before 20 years of age, and out of this number nine-tenths between the age of 3 and 15. We may reckon thirty-five per cent. of deaths between 20 and 60 years of age, of which one-half is above, and the other under 40; and for the remaining period of life fifteen per cent.—*Prov. Med. Journ.*, Feb. 19*th*, 1845, from *Gazette Méd. de Paris.*

88. *Statistics of Hernia.*—M. Maisonneuve has made a statistical report of 11,644 cases of hernia, which were examined, during a period of six years, at the Central Bureau, Paris; he thus distributes them:—

Of 11,644 cases of abdominal hernia of every description, 8,790 were observed in males; 2,854 were observed in females.

Of 8,790 cases of hernia observed in males, 8,237 were inguinal hernia; 307 were crural hernia; 246 were umbilical hernia.

Of 2,854 cases observed in females, 1,112 were inguinal hernia; 639 were crural hernia; 560 were umbilical hernia; 543 were vaginal hernia.

Of 8,237 cases of inguinal hernia observed in males, 4,483 occurred on the right side; 3,738 occurred on the left side; 16 not determined.

Of 1,112 cases of inguinal hernia in females, 542 occurred on the right side; 564 occurred on the left side; 6 not determined.

Of 307 cases of crural hernia observed in males, 171 occurred on the right side; 125 occurred on the left side; 11 not determined.

Of 639 cases of crural hernia observed in females, 344 occurred on the right side; 255 occurred on the left side; 40 not determined.

From these figures, Mons. Maisonneuve deduces the following corollaries:—

First. Hernia in males are to hernia in females, as 3 to 1.

Secondly. In 100 herniæ found in males, 93 were inguinal, 4 were crural, 3 were umbilical; whilst, in 100 cases of hernia found in females, the proportion was 40 inguinal, 21 crural, 20 umbilical, 19 vaginal.

Thirdly. In men, inguinal hernia are met with as often on both sides as on one only, and in the latter case, those of the right side are to those of the left, in the proportion of 5 to 4.

But in women, inguinal hernia are met with on both sides, three times out of four, and those of the right side are to those of the left, in the proportion of 5·42 to 5·64.

Fourthly. In men, crural hernia are met with on one side only, three times out of four, and those of the right side are to those of the left, as 7 to 5; whilst in women, crural hernia are met with on one side only, 4 times out of 5; and those of the right side are to those of the left, as 7 to 5.

Under the head, vaginal hernia, are included all tumours of the vagina and uterus presenting externally, and requiring the use of the pessary, as cystoceles, rectoceles, and prolapsus of the vagina and uterus.

Under the head, umbilical hernia, are included hernia of the linea alba, and displacements referable to the neighbouring regions.—*Med. Times*, May 10, 1845, from *Gazette des Hopitaux.*

# AMERICAN INTELLIGENCE.

## ORIGINAL COMMUNICATIONS.

*Two Cases of Femoral Hernia, with some Remarks.* By W. L. Sutton, M. D., Georgetown, Ky.

Case I.—*Intestine strangulated, mortified and adherent to the neck of the sac—Incision from within the bowel—Temporary artificial anus—Permanent recovery.*—Dec. 12, 1843, Dr. Craig called at my office, and informed me that he had a case of strangulated hernia on hand, which he very much feared would speedily terminate fatally, but if I would share the responsibility with him, we would give the patient what little chance an operation at that late period would offer. He went on to state that he had been in attendance on the patient, a lady about 50 years old, for about a week, during which time continual vomiting, pain, and some distension of the abdomen, and obstinate constipation, were the prominent symptoms; that suspecting hernia he had repeatedly inquired as to the existence of any tumour in the groin or any part of the abdomen, but had been as repeatedly, positively assured that no such swelling existed; that having full faith in the good sense of his patient he had credited her statements; that four days previously the bowels were freely evacuated, yet at his visit soon afterwards the distressing symptoms were as bad as ever, thus further discountenancing the idea of their depending on strangulated hernia; but that a few hours before his calling on me he had, altogether accidentally, learned that a swelling did exist in the right groin, and that upon examination he had satisfied himself that a small strangulated crural hernia was the real evil; that when taxed with having deceived him, she answered that "the swelling had existed for 25 or 30 years, during which time it was often as painful as it had been during this illness, and had always got well, and therefore she did not think that it had any thing to do with her sickness;" that for several days what she vomited was very stercoraceous; that at present she was nearly moribund, and if any thing were attempted there was no time to lose. We therefore immediately visited her, and I found the case fully answered the description. The pulse was very frequent and weak; countenance haggard, and bedewed with a cold perspiration; abdomen distended and tender; mind wandering. Dr. C. having previously satisfied himself of the existence of hernia, it only remained that I should do the same; and as soon as possible we shaved the parts and performed the operation in the usual way until the sac was opened, (which gave vent to about a tablespoonful of turbid fluid, very strongly characterized by the same stercoraceous odour which marked the fluids ejected from the stomach,) when we ascertained that about three inches of the small intestine, in a gangrenous state, occupied it, no adhesion existing at this part. Upon attempting to run the finger in the sac, and on the outside of the bowel, to the point of stricture, we could not reach it, but the sensation was as when we put on a glove, the fingers of which are too short. We next tried to pass a director, with no better success; then a probe, and again the flat end of the probe. After repeated trials in every direction, and finding no point which would admit the passage of any

thing, we passed a finger *within* the gut up to the stricture, and upon that a probe-pointed bistoury within the stricture, and by turning the edge to the stricture, it readily gave way so as to admit the finger. The integuments were now lightly drawn together, and dressed with adhesive strips, and the patient put to bed.

For a few hours the patient appeared to mend rapidly: her vomiting subsided: after eight or ten hours she had a small discharge per anum,—and not long afterwards one from the wound. The abdomen continued distended and tender, but something less so than before the operation. After the first 24 hours her improvement was very slow, the abdominal symptoms giving way very slowly; she did not have another discharge per anum for several weeks. But at length they became more and more frequent, whilst those from the wound as gradually diminished; and at the expiration of five months the incision had entirely healed, and from that time to this, January 27th, 1845, has enjoyed better health than for a number of years past, inasmuch as she has been entirely free from the frequent annoyance from the hernia, to which she had been subjected for the last 25 or 30 years.

*Remarks.*—I am not aware that such an operation has ever been reported, and I apprehend that the first idea in the mind of most readers will be one of decided reprehension. Such being the case, I may be allowed to offer a few remarks on the subject. We found ourselves with a case of adhesion between the protruded bowel and the sac, occupying the whole periphery of the stricture, occasioned, I presume, by the repeated attacks of incarceration to which our patient had been subject for many years—the bowel mortified, and our patient nearly dead: indeed, when we commenced the operation we believed and informed the friends that we regarded success as barely possible. It so happened that the day was rainy and dark, and we had light from a single small window.

We had two alternatives; 1st, to make an opening through the tendons above the femoral arch, and then slit down to the stricture, and *cut that upon the gut;* for we could not expect to avail ourselves of a director; or, 2dly, *to cut the stricture through the gut.* The case did not admit of slow councils or slow operations; and when we reflect upon the time necessary to perform the first-mentioned operation under the circumstances, the delicacy of the operation, and the danger of puncturing the bowel above the adherent part, and that the crural arch must be divided, and, on the other hand, that the stricture had completely obliterated the cavity of the bowel, and might be reached by making a very small incision through it, which most probably would be bounded by adherent portions, the very slight scratch on the edge of the stricture, which will suffice to liberate the strangulation, and that the operation itself is the work of but a moment, albeit a moment fraught with momentous consequences, I think the proceeding in the case may be viewed with more leniency. One thing ought to have been ascertained, but was not—the existence or not of adhesion between the outside of the sac and the stricture.

Case II.—*Repeated strangulation—Absence of vomiting—Death.*—On Monday, Nov. 11, 1844, I visited A. Parker, in the absence of his regular physician, and received the following history of his case. On the 4th inst., whilst straining at stool, he felt a slight sensation in the right groin, as if something had given way, but no pain followed. On the 5th, after riding eight or nine miles, he felt some pain in the same spot, which gradually

increased and spread over the abdomen, being not very severe, but sufficient to render him very uncomfortable. He rode home in the evening without any increase of his discomfort. He continued to suffer, but not severely, until Thursday, when he had a motion from his bowels. On Saturday the distress became more severe, when he vomited, two or three times, a little water having no unpleasant smell. From this time until I saw him, he remained in much distress, no stool or vomiting. I found him with an abdomen somewhat tense, and slightly tender on pressure. There was a small tumour at the right femoral arch, the long diameter of which corresponded with the arch. This tumour had never been observed before his ride to town on the 5th. It was not painful, nor was there any tumefaction of the integuments. I endeavoured to press the contents of the tumour into the cavity of the abdomen, but without success. During my stay he had his bowels freely moved by some purgative medicines, which he had previously taken, and expressed himself as considerably relieved, the tumour, however, remaining unaltered.

15*th*. Visited him again with his ordinary physician, upon a message, which induced me to believe that an operation would be necessary. We found him very comfortable, all distension and tenderness of the abdomen gone; pulse 80, regular; respiration normal; tumour very much as when I saw him before. We learned that after I left him on the 11th he remained very comfortable until the 13th, when he was a good deal swelled and tender in the abdomen, but no vomiting. This state was relieved by the administration of purgative enemata and castor oil; that on the afternoon of the 14th a recurrence of suffering took place, in consequence of which we were again summoned; but again the means advised had been sufficient to open the bowels and relieve him. Each of us made a protracted effort to reduce the tumour, but without being able to make any impression on it.

16*th*. Dr. Rawlings was called to him early in the morning, and found him suffering severely with tenseness and pain in the abdomen; indomitable constipation; no tenderness in the tumour; no nausea, so far from it that (doubting, perhaps, the correctness of our previous diagnosis) he gave him from 60 to 100 grains of ipecac. without producing any sickness at stomach.

17*th*. Visited him again and found him moribund; pulse imperceptible at the wrists, the femoral artery at the arch beating about as strongly as the radial of an ordinary man; considerable tumefaction and tenderness of the abdomen; no tenderness in the tumour; no tumefaction of the integuments; the tumour itself decidedly less than when I last examined it. Died at 4 A. M. of the 18th.

Seven hours after death examined the body as far as could be done with the consent of the friends. Present Drs. Rawlings and Sullivan. Several bluish spots on the thigh and abdomen. The tumour, I thought, smaller than on the previous day. Upon cutting down on the tumour it was found to consist of a small portion of omentum, (about the size of a nutmeg,) firmly compacted, and adherent to the hernial sac throughout, by apparently recent adhesions; no fluid in the sac. The colour, firmness and attachment to the sac were such as to convey distinctly to each of us at first sight, that it was an inflamed gland. The structure existed at the inner edge of the ligament. The omentum contained in the sac was not gangrenous; but the small intestines adhered to the omentum, the perito-

neum, and the contiguous convolutions to each other, and were extensively mortified.

*Remarks.*—Here we had a strangulated hernia followed by death; but was death caused by the strangulation? If so, (as I believe,) we had a continued recurrence of tightening and loosening of the stricture; an absence of marked pain of the strictured part; no stercoraceous vomiting at any time; and none of moment of any kind. We had also the progress of diseases much greater in parts not implicated in the stricture, than in that portion of the omentum which was.

We had the tumour unaltered in its condition by the presence or absence of strangulation—at least such was the case if a soluble state of the bowels and absence of distension and pain in the abdomen depended on a relaxation of the stricture.

It is mentioned that on the 17th, the tumour was of less size than it was at either of my previous visits. Of this fact I am fully convinced, both because of my distinct recollection of the size, but principally because in my attempts at reduction, it so happened that after attempting to force the tumour, as it were, into the thigh, and changing the direction of pressure, it was at two or three different times thrown up partially over the lower edge of the arch, whereas at the time named, it could not be put into that position.

I do not know of any authority which would justify an operation at either time when I saw him; and yet I believe that a successful operation at the first or second visit would have saved his life.

I think an operation, undertaken during life, would have been both delicate and difficult. Although the integuments covering the tumour were in the most favourable condition, the omentum was so perfectly jammed into the sac, that it appeared impossible that any more could have been forced in; and the same stroke of the scalpel which opened the sac, would be very apt to enter the omentum: in which case the appearance of the stricture and the intimate adhesion to the sac would have been very likely to throw doubt upon the actual condition of things. Again it was utterly impossible to introduce the finger into the sac, beside the omentum, (even after breaking up the attachments,) so as to feel the stricturing part. This remark is made upon the supposition that the parts would have been found in the same condition as after death. I believe that the sac was larger on the 11th and 15th than at death; but it had the same round, hard, gland-like feeling every time I examined it, and therefore was probably well filled. I think, however, that the adhesions between the sac and its contents may not have existed on the 11th.

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***Case of Extensive Inflammation of the synovial membrane of the Knee Joint terminating in suppuration, without inducing ulceration of either the hard or soft textures of the Joint.*** By Samuel Tyler, M. D.

I was called on the 29th of October, 1844, to visit a patient 15 years of age, labouring, as it was then supposed, under a scrofulous affection of the knee-joint. Upon inquiry into the history of the case, I learned that some six months previous the patient had given the limb a severe twist, whilst running over rutty, uneven ground.

Finding the joint excessively swollen, the leg so contracted as to render it almost impossible to place the foot upon the ground by force, I proceeded to treat the case in the following manner:

Commencing with the application of a blister which surrounded the

joint, which was afterwards kept discharging by the use of warm poultices, I gave on each alternate day the favourite purgative of Dr. Physick, jalap and cream of tartar, in doses sufficient to procure free evacuations.

Under this treatment the general system improved somewhat, but the joint continued to swell, when on the 16th of November I made a free incision upon the inner side of the joint, evacuating at least one quart of pus. A continual discharge was kept up from this opening until the 29th of December, when I made use of "Chase apparatus" to overcome the contraction of the limb, which was perfectly effected in less than three weeks' time, leaving the patient with a limb perfectly straight, and entire mobility of the joint.

I consider the great peculiarity of this case to consist in the fact, that where there should be so excessive and long continued inflammation of the synovial membrane, that it should terminate without inducing ulceration either of the soft or hard textures of the joint.

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## DOMESTIC SUMMARY.

*Survivorship.*—Hugh Swinton Ball, with his wife and adopted daughter, were lost on board the steamer Pulaski, on the 14th of June, 1838. By his will, he bequeathed to his wife his household furniture, servants, &c., and in case he died without children he gave her all the property received by him in marriage, and other legacies out of his own estate. A claim was made by her heirs, on the ground that she had survived her husband.

Chancellor Johnston heard the cause at Charleston in January, 1839. In his opinion he first reviews the cases that have already come before various courts, and remarks that in all these "the English and American courts have hitherto carefully avoided the adoption of any rule of decision. The cases have gone off by compromise, or were decided upon a rule adapted to the nature of the question before the court, and not to the question of right as transmitted by survivorship;" or, in the words of Chancellor Kent, "The English law has hitherto waived the question." In proof of this he adduces the well-known cases of Gen. Stanwix and Selwyn, of Taylor *v.* Diplock, and Wright *v.* Sarmuda. Still Chancellor Johnston is not prepared to abandon as delusive all efforts to attain rules capable of deciding the fact of survivorship, even in instances deemed conjectural. But if there be any evidence whatever, even though it be but a shadow, it must govern in the decision of the fact. The *code civil* is indeed grounded on this. It provides that if several persons entitled to inherit from each other, happen to perish, without the possibility of knowing which died first, the presumption of survivorship is determined *by the circumstances of the fact*, and is only in default of these that rules are enacted, applicable to cases of a more conjectural character.

"In what I have said hitherto I have contemplated a case where the cause of death consisted of one disaster, whether of more rapid or of slower operation. But where the danger consisted of a series of successive operations, separated from each other, and each capable of inflicting death upon the victims according to the degree of exposure to it, there is certainly more scope for testimony and for inference, from circumstances, than in other cases."

The facts are thus stated by the chancellor.

"The Pulaski left Savannah on the 13th of June, 1838, and arrived at Charleston that evening. The next morning Mr. and Mrs. Ball, their adopted daughter and a servant, went on board, and she departed north on her course, until about 11 o'clock of that night when, most of the passengers having retired to their berths, the starboard boiler exploded. By the explosion an extensive breach was made on the starboard side of the vessel. Her main deck was blown off, thus destroying the communication between the forward and after part of the steamer. The forward part of the upper deck (called the hurricane deck, in contradistinction to

the after part, which is called the promenade deck) was blown off, carrying with it the wheel-house, in which the commander of the boat, Capt. Dubois, was sleeping at the time; the gentlemen's forward cabin was much torn, its floor ripped up and its bulk head driven in; and Major Twiggs, whose berth was there, gives us reason to suppose that many perished in that part of the vessel, by the explosion. The gentlemen's after cabin (which was under the main deck, and immediately beneath the ladies' cabin, which was on that deck) was also injured. Some part of the floor was ripped up, the bulk head partly driven in, and the stairs communicating with the deck more or less shattered. The vessel was careened to the larboard, and as she dipped began to fill with water. In a very short time the hold was filled, and the water gained to the level of the floor of the gentlemen's cabins. It rose higher with great rapidity; the vessel settled to the centre, where the breach was, and all hope that she could hold together was abandoned. She parted amidships, and the forward and after parts pitched into the water, towards the centre, at an angle of nearly thirty degrees. The gentlemen's after cabin was now entirely filled, and the forward cabin was certainly in as bad a condition. There were some persons on the forward part of the vessel, nearly all of whom speedily perished, but the greater number were in the after part, including one or two, who had passed by swimming from the forward to the after part. Of those on the after part, as many as could, climbed to the promenade deck; but there were many, mostly ladies, among whom was Mrs. Ball, who remained on the main deck. These, as that deck sunk deeper and deeper, retreated along the gangways, by the ladies' cabin, towards the stern. The promenade deck, by the action of the waves, was burst from the top of the boat, and was submerged with all that were on it. Whether the stern of the boat was submerged at, or after this time, is uncertain. Some of the witnesses think it was, even before the promenade deck, others that it was not submerged at all. All these events had taken place, according to most of the witnesses, in about from forty to fifty minutes; according to others, in less time.

"Some few escaped in the boats, others on parts of the wreck, and others on rafts constructed by them as they could. Of Mrs. Ball nothing is known, after the submerging of the promenade deck, nor for some time before. Before that event, her cries were heard by one witness, who had gained the promenade deck, as they proceeded from the place she still occupied on the deck below. No witness speaks of her afterwards.

"Within a few minutes after the explosion, according to one witness who knew her, she came out of the ladies' cabin, and began to call upon her husband. The scene was one of terror, as may be supposed; but although a crowd was instantly gathered at that part of the vessel, there was not much noise. The surrounding horrors seem to have subdued the sufferers, and in mute astonishment they contemplated the fate that awaited them. Even the wheels had stopped. Nothing but the sound of the waters, which were somewhat disturbed, and the hasty exclamations of friends, as they sought each other out, and the noise occasioned by such preparations as the more active and prudent felt themselves called upon to make for themselves and others under their charge, were heard. But the voice of Mrs. Ball was heard above all others, calling upon her husband. She ran forward to the chasm caused by the explosion, retraced her steps, and continued to traverse the starboard gangway in search of him, uttering his name in tones so elevated by her agony, that they reached most parts of the vessel, and seem to have made an indelible impression upon all who heard them. Her cry, according to one witness, was a cry of bitter despair and anxious inquiry, and, according to all, it was lifted in shrill tones, carrying an irresistible appeal to all hearts.

"Mr. Ball was neither seen nor heard. Mrs. Ball was heard and seen by many, but no response was heard to her cries, nor was any one seen to approach her, for her protection or consolation. Two witnesses, who knew Mrs. Ball, saw *her* but did not see *him*. One of them passed and repassed her, in a hurried manner, to be sure, but did not discover him.

"He was neither seen nor heard after the explosion, unless he was the person referred to by two witnesses, who state the following circumstance: Very shortly after the explosion, a boat was let down on the starboard side of the steamer, into which some persons descended. As the boat was lying below, a gentleman came

to that side of the deck, and throwing a coat into the boat, called to those in it to hold fast a moment and instantly disappeared. He never reappeared, but the next day, the coat was found to be a black dress coat of a large size (such was the size of Mr. Ball) and in one of the pockets was discovered a shirt collar, on which was written the name of Ball, with some initials, which the witnesses have forgotten.

"Now these are the circumstances of the case. It is not the case of an unknown calamity, nor of one withdrawn from observation, nor is it a case where the calamity was of instantaneous operation. It is a case for testimony and to be decided on testimony."

Chancellor Johnston proceeds to say, that as the right on the part of Mrs. Ball was derivative, the burden is on the plaintiffs, to prove that she was the survivor. But although bound to prove this, it does not follow that they are to prove it to demonstration. We must take the best evidence that the case affords.

Although unwilling to rest on the fact, that Mrs. Ball was the last person seen, yet he inclines to the opinion, that in cases of persons lost by a common accident, this should be the ground of decision. He prefers in the present instance, "to put the case upon the ground of probability, arising from the evidence; upon a belief engendered by a combination of the circumstances, and upon the superiority of positive proof over conjecture or even probability.

"The explosion produced its most fatal effects in the gentlemen's forward cabin, and that was the first part of the vessel which sunk. The after cabin was also much injured. From the forward cabin many persons never escaped. From the after cabin, so far as we know from the evidence, all did escape except Judge Cameron, an infirm old man. But from the description given of its condition, it is possible that some others may have been detained, either from being hurt or otherwise, until the cabin filled.

"It is *certain* that Mrs. Ball escaped the explosion. Is it certain that Mr. Ball did? Mr. Ball engaged a berth in the after cabin. The probability is that he got it, but this is far from certain. The boat came with many passengers from Savannah, which may have occasioned Mr. Ball to be displaced and transferred forward. I think, however, it is not probable he was so transferred, because by an arrangement between the agents in Savannah and at Charleston, they were entitled to let the berths, in alternate order, throughout the boat; and we know, that some of the passengers, who came from Savannah, had not the advantage of pre-occupying the after cabin, and that some of the Charleston passengers were let into the cabin; Mr. Ball, therefore, was probably in that cabin. But there is a probability that he was in the forward cabin, and if so, in the greatest danger from the explosion. Mrs. Ball was clear from that danger *certainly*, Mr. Ball only *probably*. Supposing that he was in the after cabin, still there are chances of his destruction there, from which, we know, Mrs. Ball was totally free. On the deck. We know Mrs. Ball was there. *This is certain.* Is it certain that Mr. Ball had hitherto escaped and was the person who threw the coat into the boat? It may be that he was the man. I think it hardly probable. I should have thought that he was the man, if he had been seen at any time near his wife, or had answered to her heart-rending calls. But it is more probable that some one else in the hurry of the moment may have mistaken Mr. Ball's coat for his own and thrown it into the boat, than that an affectionate husband and brave man, as Mr. Ball is proved to have been, should have heard such appeals as were made to him by his wife, and should at such a time, have failed in his duty to her.

"We have indubitable evidence that she had so far escaped; the same evidence with a moral force, which cannot be resisted, convinces us, that he must have already perished, or he would have been at her side. I have, from all these considerations, formed the opinion that Mrs. Ball survived her husband."

On appeal, (Feb. 1840,) the above decision was confirmed.

The reporter gives the argument of Col. Hunt, counsel for the appellants. The burden of this is, that the exact time of the death of Mrs. Ball is known. She was from her terror and feebleness undoubtedly drowned, when the decks sank. Mr. Ball may have survived for some time after. The great error (he objects,) on the other side, is the resort to negative testimony. He was not seen —he was not heard—therefore he was dead—although no cause of death is traced

to him. There is no proof that he was killed by the explosion. He was a good swimmer—he may have caught a fragment of the wreck and survived a long time. As to Mrs. Ball, this was impossible.

Col. Hunt considers it certain that Mr. Ball had a birth in the after cabin, from which all escaped except Judge Cameron. He is also decided in opinion that it was Mr. Ball who threw his coat into the boat; nor because he was not with his wife, does it prove that he was dead. He might have been seeking some means to save her; he might have been looking for his adopted daughter.

"There is no legal proof that Mr. Ball was dead at the time the witnesses heard the cries of his wife. No human testimony can fix the time of his death, while that of his wife is rendered almost certain. And thus, so far from the complainant's having established their suvivorship, the weight of evidence proves that the husband survived. It is enough for us, that the fact is left unsettled. The burden of proof was upon the complainants, and they have failed to establish their position."—*Pell and another v. Ball's Executors.* Cheves' Cases in Chancery, (South Carolina,) vol. 1. T. R. B.

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*Recent Laws for the punishment of Criminal Abortion and Concealment of Birth.*—The following law has just been passed in Massachusetts:—"Whoever maliciously, or without lawful justification, with intent to cause or procure the miscarriage of a woman, then pregnant with child, shall administer to her, prescribe for her, or advise or direct her to take or swallow any poison, drug, or medicine, or noxious thing; or shall cause or procure her, with like intent, to take or swallow any poison, drug, or medicine, or noxious thing; and whoever maliciously, and without lawful justification, shall use any instrument or means whatever, with the like intent, and any person, with the like intent, knowingly aiding and assisting such offender or offenders, shall be deemed guilty of felony, if the woman die in consequence thereof, and shall be imprisoned not more than twenty years, nor less than five years in the State Prison; and if the woman doth not die in consequence thereof, such offender shall be guilty of a misdemeanour, and shall be punished by imprisonment not exceeding seven years, nor less than one year in the State Prison, or House of Correction, or common jail, and by a fine not exceeding two thousand dollars."

The Legislature of the State of New York passed the following law on the 13th of May, 1845.

§ 1. Every person who shall administer to any person pregnant with a quick child, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug, or substance whatever, or shall use or employ any instrument or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, shall be deemed guilty of manslaughter in the second degree.

§ 2. Every person who shall administer to any pregnant woman, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug, substance or thing whatever, or shall use or employ any instruments or other means whatever, with intent thereby to procure the miscarriage of any such woman, shall, upon conviction, be punished by imprisonment in a county jail, not less than three months nor more than one year.

§ 3. Every woman who shall solicit of any person any medicine, drug, or substance, or thing whatever, and shall take the same, or shall submit to any operation, or other means whatever, with intent thereby to procure a miscarriage, shall be deemed guilty of a misdemeanour, and shall, upon conviction, be punished by imprisonment in the county jail, not less than three months nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment.

§ 4. Any woman who shall endeavour privately, either by herself or the procurement of others, to conceal the death of any issue of her body, which, if born alive would, by law be a bastard, whether it was born dead or alive, or whether it was murdered or not, shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be punished by imprisonment in a county jail not exceeding one year.

§ 5. Any woman who shall be convicted a second time of the offence specified

in the fourth section of this act, shall be punished by imprisonment in a state prison for a term not less than two or more than five years.

§ 6. Section nine, article first, title second of chapter one, of the fourth part of the Revised Statutes, and section twenty-one, title six, chapter one of the fourth part of the Revised Statutes, are hereby repealed.

The laws repealed by the last section are the following.

Every person who shall administer to any woman pregnant with a quick child, any medicine, drug, or substance whatever, or shall use or employ any instruments or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, or shall have been advised by two physicians to be necessary for such purpose, shall be guilty of manslaughter in the second degree.

Every person who shall wilfully administer to any pregnant woman, any medicine, drug, substance, or thing whatever, or shall use or employ any instrument or other means whatever, with intent thereby to procure the miscarriage of any such woman, unless the same shall have been necessary to preserve the life of such woman, or shall have been advised by two physicians to be necessary for that purpose, shall, upon conviction, be punished by imprisonment in a county jail not more than one year, or by a fine not exceeding five hundred dollars, or by both such fine and imprisonment."

I need hardly point out the superiority of the law in Massachusetts, to those who will take the trouble to compare the two enactments. The introduction, or rather the continuance of the distinction of *quick with child*, is supremely ridiculous, when we recollect, that we must prove this fact, by the mother, who is herself, in almost every case, a *particeps criminis*. Again, a premium is offered for committing the crime at a period when it is least dangerous to the mother, although the moral guilt is certainly as great in one case as in the other. It is no felony to destroy the ovum before the 4th or 5th month, and the punishment is only from three to twelve months' imprisonment in the county jail.

Far better are the broad provisions of the Massachusetts law. It is felony, if the mother's life be destroyed, and in all cases of abortion, no matter how soon after pregnancy, the offender *may* be reached with heavy punishments.

It will be observed that in the New York Act, the female soliciting and consenting, is made liable to punishment. This is certainly a salutary provision.

The enactment of the English code relative to the concealment of the death of an illegitimate child, is introduced for the first time, at least, in the State of New York.

T. R. B.

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*Report of the Surgeon General, U. S. Army.*—The Surgeon General in this interesting document states, that "the number of officers and men remaining on the sick report on the 30th of September, 1843, was 726, and the number of cases of indisposition which have occurred since that period is 20,982—making in all, 21,708 cases that have been under medical treatment within the last twelve months.

"Of the whole number of sick, 20,760 have been restored to duty, 15 are on furlough, 208 have been discharged from the service, 9 have deserted, and 96 have died—leaving on the 30th of September, 620 still on the sick report.

"As the mean strength of the army for the last twelve months was, according to the monthly returns on file in the Adjutant General's office, about 8,600, and the number of cases of sickness reported by the medical officers during the same period was 20,982, with an aggregate loss by deaths of 96, it will appear that the proportion of cases of indisposition to the number of officers and men in service was as 2.44 to 1.—or that, on the average, each man was sick 2.44 times during the year; that the ratio of deaths to the number of men was as 1 to 89.58, or 1.04 per cent.; and the proportion of deaths to the number of cases treated as 1 to 226.12 or 0.44 per cent.

The medical officers of the army have also been engaged in a regular series of meteorological observations, and full reports have been received the past year from fifty-four military posts. Valuable results cannot fail to result to the science of meteorology, from these observations when they shall have extended over a sufficient period.

*Aortitis.*—Dr. Geo. N. Burwell relates, in the *Buffalo Medical Journal*, (June, 1845,) the following interesting case of aortitis, which occurred in the Philadelphia Hospital, Blockley, during his residence there as resident physician.

Peter Stevens, black, aged sixty-three years, was brought to the hospital, late in the afternoon of February 13th, 1843. He was carried to his ward, not being able to walk. The physician who received him, said that he complained of intense pain in his chest, without being able to localize it; "it was all through it," to use his own expression. He felt his pulse, and found it nearly natural, both in frequency and strength. He had no fever. These observations were hurriedly made, however, and ought probably, to be received with some degree of allowance.

I first saw him about 8 o'clock in the evening; he was lying in his bed on his left side, his head bent forward, with his chin nearly touching his chest, gasping for breath, his lower jaw falling with every inspiration; at times his eyes would roll up, which, with the anxious yet relaxed state of his countenance, gave him a deathly appearance. His intelligence was perfectly good. He answered our questions with difficulty, and at times, they had to be repeated. We found that about three weeks before he was taken with symptoms of pleurisy of the left side, from which he had never entirely recovered; but had kept at his work as a common porter, and had been thus employed all the day previous. At one o'clock in the morning of the 13th, he had been thus attacked suddenly, and while in bed. The pain in his chest, above spoken of, constituted his greatest misery. An order for admittance to the hospital, was obtained for him during the forenoon, and he was brought in, in the afternoon, without having received any medical assistance.

A bowel complaint in the meantime had come on, which obliged him to get up to stool every fifteen or twenty minutes, the discharge being thin, and passed with much straining. He found the position on the left side with his head low, the most comfortable one, although, from his difficulty of breathing, it would have been supposed he would have been easiest sitting up. He could not lie on his back without aggravation of his sufferings. The nurse informed me that from the time of his entrance, he complained of great distress across the upper portion of the sternum. Not much was said to him, as he disliked being talked to. On examining his chest, as well as I could without adding to his pain, I found on the left side almost total flatness on percussion, from the second rib to the base of the chest, and to the left axilla; the flatness did not extend much to the right of the sternum. Percussion of the right side of the chest, and over the left lung, posteriorly, resonant. The respiratory murmur could be heard clear at the apex of the left lung, and throughout the right lung. No murmur heard over the lower lobe, posteriorly, where the percussion was clear; between the second and fourth ribs of the left side anteriorly, there was bronchial respiration, although not very loud.

The sounds of the heart could nowhere be heard, nor could its impulsion be felt. His pulse was scarcely perceptible, it was so small and feeble; it could not be felt in the left wrist when he lay upon his left side. Its frequency was about 110 beats in a minute.

No diagnosis was made out. The symptoms of any of the common diseases of the chest were not well enough marked, to found upon them a definite opinion. He died in two or three hours after I left him.

*Post-mortem, thirty-eight hours after death.*—The body was that of a large powerful negro, full six feet and two to four inches high, and not at all emaciated; some froth on the lips; blood ran from the nose on turning the body over; face somewhat bloated. Pleuritic adhesions of pleuræ of both lungs, which were of some standing, yet easily broken; lungs congested, but crepitant. Heart hypertrophied and dilated, but the relative size of the cavities not lost; slight thickening of the aortic valves. On cutting into the aorta, its internal coat was found to be of a bright scarlet colour, which extended throughout the whole length of the vessel, and down the femoral arteries until they became popliteal; the injection, also, extended into the carotid, subclavian, and cœliac arteries. The other arteries not examined. A piece cut from the middle portion of the humeral artery, did not exhibit this redness. The arteries which were inflamed, were empty, except a small clot near the aortic valves. The endocardium was not affected; dark, slightly

coagulated clots occupied the cavities of the heart, and extended into the pulmonary artery, the inner coat of which was also reddened, but not near to the extent of that of the aorta, and of a duller colour. The inflamed membrane was not thickened nor was any fibrous effusion noticed. In the cellular tissue under it, were noticed small spots or flakes, of what appeared to be ætheromatous deposit, which was found quite thickly deposited in the entire length of the aorta. The venæ cavæ had blood in them, and the lining membrane was very lightly tinged of a dark reddish-brown colour, evidently the result of imbibition merely. There was an ounce of dark bloody fluid in the pericardium and about the same quantity in the left pleuræ. The mucous membrane of the stomach was slightly inflamed in two or three places. Other organs of abdomen healthy. Brain not examined.

On reading the above, the first question that will arise, will, probably, be whether this was really a case of inflammation, or merely one of cadaveric strain? A great deal has been written on this point, and in deciding upon the true pathology of the case, it is an important one. There is no doubt in my mind as to the inflammatory nature of the redness. The marked difference between the bright colour of the aorta, and the sombre stain of the pulmonary artery, the still fainter colour of the venæ cavæ, and the healthy state of the endocardium, all of which had either fluid or clotted blood in contact with their lining membrane, demonstrate this point conclusively. There are only two facts which afford the least reason to doubt this, viz: the fluid state of the blood, and the length of time which intervened between death and the post-mortem examination.

The case is interesting from its being one of the most rapidly fatal cases of arteritis on record. A strong man, healthy, with the exception of some pain in his side for two or three weeks, which was not severe enough to confine him to the house, after an ordinary day's work, is awakened suddenly in the night with severe pain all through his chest, which lasts without intermission, till his death, about twenty-two hours from the first accession of pain. Did the inflammation exist before the pain was felt? I know no way of determining this; probably not, in its acute form, at least. What connection was there between the inflammation and the little, opaque, cream-coloured deposits, noticed so thickly beneath the inner membrane? Their consistence would indicate in them a greater age than the inflammation had, but it does not follow that, of course, they were the exciting cause of the inflammation. This point must remain undecided.

The next question that arises, is, what is the connection between the inflammation and the agonizing pain suffered by the patient? Was it angina-pectoris? If so, the case would go far in support of Dr. Corrigan's opinion, that "inflammation of the lining membrane of the mouth of the aorta, is capable of producing the group of symptoms to which we give the name of angina-pectoris, and is, therefore, entitled to a place in the list of the causes of that affection."* It does not appear in the notes that he had pain in the left arm, and I do not recollect of asking him the question. If I did not, he would not have complained of it, for such was his distress, that he complained to me of nothing, and appeared as though he wished to be left alone to die. Besides, he did not die the sudden death of those who die of angina-pectoris.

The case is of high interest in a pathological point of view, and perhaps, also, in a legal sense. Therapeutically considered, it is not of much value, at least, after I saw him, for he was then dying beyond the reach of medicine.

Before closing this article, it may be well to take a glance at the varieties of acute arteritis. There appear to be three forms of it. The *first*, and most common variety, is that occurring with endocarditis, where the inflammation extends into the aorta, more or less. This cannot well be distinguished from the endocarditis, nor is it important that it should be. It is, merely, an aggravated and extended form of this inflammation, and as such, renders the prognosis more grave without materially altering the treatment. This variety, also, sometimes complicates cases of pericarditis, and of pleuro-pneumonia.

The *second* variety is seated in the extremities, and far more frequently attacks

* For an abstract of Dr. Corrigan's paper, see Amer. Med. Journ., old series, vol. 22, p. 467.

the legs, than the arms. It may be primary, or secondary; as when it supervenes upon amputation, or upon a diseased state of the coats of the arteries of the limbs. Reported cases of it may be found scattered through the different medical journals. Dupuytren, in his Surgical Lectures, gives two cases. It has often probably been confounded with phlebitis, but may be distinguished from it by two signs; 1st, the reduction, in arteritis, of the temperature of the limb, and 2d, by the occurrence of gangrene. Arteritis would seem to lead to gangrene, while phlebitis gives rise to œdema. This variety having commenced in the limbs, is not always confined to them, but may travel gradually, to the aorta, and on to the heart.

The *third* and rarest form of the disease, is seen in those cases where the inflammation first attacks the aorta, extends to its branches, and perhaps, also, to the endocardium. The case I have given belongs to this class. It is not as yet susceptible of positive diagnosis, but where the patient survives a number of days, it might be guessed at by the negative evidence of exclusion, with more or less certainty, according to the skill, tact and experience of the physician.

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*Twins, at different stages of development.*—By H. N. Loomis, M. D. On the 13th April, 1839, I attended Mrs. H. in her third confinement, who was delivered of a full-sized healthy, female child, after a labour of about six hours continuance. The after-birth was expelled in a few minutes after the birth of the child, and with it came away a male fœtus, measuring 4 1-8 inches in length, in a perfect state of preservation. It was flattened to about one-third of an inch in thickness, with the limbs flexed, and fairly imbedded in the sides of the body. When discovered in the vagina, and removed, (which was just before the placenta came away,) it was apparently free from any connection with the placenta. Some traces of a greatly attenuated cord were, however, visible on inspection.

My explanation of the above is, that the case was primarily a twin conception, and that the immature fœtus either died at a period corresponding to its development, or, from some cause, its vitality was reduced to so low a grade as barely to continue, without being sufficient for its farther development.

In connection with the above, I will also mention the case of Mrs. T., whom I attended 1st Oct., 1841. This was her first pregnancy, and after a labour of 12 hours she was delivered of two dead boys. One presented the appearances of a fœtus at the fifth month, with the surface pale, and somewhat shriveled, but in a state of perfect soundness; the other, corresponding in all respects with the date of her pregnancy, which she supposed to have approached to near the eighth month. This last was fat, of rather large size, and had evidently died quite recently. Blood was extravasated the entire length of the cord, and over a considerable portion of the abdomen surrounding the navel, otherwise the surface was natural.—*Buffalo Med. Journ.*, June, 1845.

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*Case of Procidentia Uteri during Labour, in which artificial means were necessary to effect delivery, with subsequent replacement of the uterus and complete recovery.*—The following interesting case communicated by Dr. Raymond Harris, of Bryan Co., Georgia, to Dr. J. M. B. Harden, of Liberty Co., Georgia, is published in the *Southern Medical and Surgical Journal*, for May last. Cases of a similar character will be found in the No. of this Journal for July, 1844, p. 257, and January, 1845, p. 232.

"In April, 1829, a negro woman belonging to Capt. George Rentz, of McIntosh county, was taken in labour.—She was about 40 years of age, of good constitution, mother of several children, and so far as is known, not subject to any previous prolapsus or other disease of the womb. Something unusual and anomalous having occurred during the progress of the labour, Dr. Harris was sent for. He found her, on his arrival, in the following condition:—She was lying on her back, with the whole gravid uterus between her thighs, retained only by the ligaments, which were much stretched but not ruptured, and discharging from its external surface a serous or sanious fluid. The woman had been in this condition for about 24 hours. She had had no pain since the descent of the uterus, and was complaining of none at this time. The liquor amnii had been discharged. After a careful examination, no motion or other sign of life in the fœtus could be perceived. The uterus appeared to be in a perfectly quiescent state, without any disposition to contract. The os tincæ was barely dilated sufficiently to allow the

introduction of *two fingers*. Finding it absolutely necessary to relieve her as soon as possible, the Doctor proceeded to deliver her by artificial means—he opened the head of the child with a suitable instrument, and then, having an assistant to hold and support the uterus, he introduced his hand, and by careful *traction*, succeeded in removing its contents. There was very little pain during his manipulations. He now returned the womb, which had scarcely contracted at all, and advising the recumbent position, left her. She had a *very good "getting up,"* and two years ago the Doctor learned, *was in good health.*

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*Wound of the Axillary Artery and Plexus of Nerves.—Amputation below the shoulder joint.—Secondary hemorrhage.—Ligature of Subclavian Artery.* By ALFRED C. POST, M. D., Surgeon to New York Hospital.—(*New York Journal of Medicine and the Collateral Sciences*, March, 1845.)—A rope-maker, of good constitution, 37 years of age, on the 15th Nov., 1843, while cutting hemp with a large and sharp instrument resembling a scythe, wounded his right arm in the axilla, making a transverse incision which divided all the soft parts down to the bone, and of course dividing the axillary artery and vein and the brachial plexus of nerves. Dr. Cox, of Williamsburg, Long Island, who was fortunately in the vicinity, secured the axillary artery with a ligature, within a few minutes after the accident happened, but not until a large quantity of blood had been lost. On the following morning the patient was conveyed to the New York Hospital. The limb at this time was exceedingly swollen and cold, and the symptoms of incipient gangrene were so manifest, that at a consultation of the surgeons in the hospital, it was unanimously agreed that immediate amputation should be resorted to. Dr. P. accordingly removed the arm, by a double flap operation, about two inches below the head of the bone. The axillary artery being denuded for some distance above the ligature, which had been previously applied, he placed a second ligature around it three quarters of an inch higher up. The parts incised were found to be somewhat infiltrated with blood. The edges of the wound were brought together, and secured in the usual manner by sutures and strips of adhesive plaster. Union did not occur by the first intention, but free suppuration was established within 48 hours after the operation. Tonics and generous diet were administered, and every thing went on favourably until the 30th November, about half an hour after midnight, when he was awakened from his sleep by a feeling of pain in the stump, and the trickling of a warm fluid. The ligature had come away a day or two before. Dr. Post saw the patient soon after and summoned a consultation. The dressings were removed and the stump examined; there was no return of the hemorrhage, and the vessel from which it had proceeded was not to be seen. It was agreed that the wound should be left open, being merely covered with lint, which was directed to be kept constantly wet with cold water. The patient was watched for several days by a succession of medical students, who were directed to compress the subclavian artery against the first rib, if the hemorrhage should return. There was no further bleeding until the 6th December, about midday, when a profuse arterial hemorrhage occurred suddenly and without warning. The quantity of blood which was lost amounted to at least a pint: it had soaked through the matress upon which he was lying, and formed a puddle upon the floor. Dr. P. was in an adjoining room, and was immediately sent for; on his arrival he compressed the subclavian artery against the first rib, and in this manner restrained the hemorrhage, but not without considerable force. Doctor Watson, who was at the time in the hospital, was sent for, and compressed the artery below the clavicle, while Dr. P. proceeded to perform the operation of securing the vessel, where it emerges from between the scaleni muscles. During the operation, a slight wound was inflicted upon the external jugular vein, and a bubble or two of air entered with an audible gurgling sound: the further entrance of air was promptly arrested by the application of Dr. Watson's finger upon the wounded vein. A ligature was applied to the supra-scapular artery, which presented itself in the wound: this vessel being drawn aside, Dr. P. could feel the pulsation of the subclavian artery where it crosses the first rib. Dr. P. then denuded the artery of the fascia and cellular tissue covering it, and without any difficulty passed a ligature under it by means of Sir Philip Crampton's admirable needle. Before tightening the ligature, the artery was distinctly

seen pulsating over it, by Dr. Watson and the students who were present. After securing the artery, a firm compress of lint was applied over the wound of the jugular vein, and the edges of the cutaneous incision were brought together by means of sutures and adhesive plaster. After the operation, the patient appeared very much exhausted; but he gradually rallied under the influence of stimulants and tonics. Suppuration was freely established within a few days, and the compress of lint, which had been left within the wound, was discharged with the matter. The ligature, which had been applied to the subclavian artery, came away on the 2d January, 1844, 27 days after it had been applied. The following report was made on the 19th January. The wound on the clavicle is slowly contracting and healing at the edges. The stump is nearly healed; but a portion of the extremity of the bone is denuded, being overlapped by fungous granulations, and it will, no doubt, exfoliate. The patient is still taking tonics: his appetite is good, and his general condition much improved.

On the 9th April, he left the hospital in good health, the wound over the clavicle being healed with the exception of a point not much larger than a pin's head. The stump was very nearly healed, there being no longer any exposed bone.

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*Statistics of the Medical Colleges of the United States.*—The following table exhibits the number of students and graduates in most of the Medical Colleges in the United States for the session 1844–5. We have to regret that it is not complete, but hope the proper authorities will furnish us the information to render it so.

| Medical Schools. | Students. | Graduates. |
|---|---|---|
| University of Pennsylvania, | 446 | 164 |
| College of Physicians and Surgeons, N. Y. | 193 | 37 |
| Harvard University, Boston | 157 | 19 |
| Transylvania University, Lexington | 156 | 38 |
| Medical College of the State of S. Carolina | | 74 |
| Jefferson Medical College | 409 | 116 |
| Medical College of Ohio | 210 | 47 |
| Medical Institution of Yale College | | 11 |
| Medical Institute of Louisville | 286 | 71 |
| Cleveland Medical College | 109 | |
| Albany Medical College | 104 | 19 |
| University of Maryland | 103 | 43 |
| University of the City of New York | 378 | 97 |
| Medical College of Georgia | | 33 |
| Geneva Medical College | 183 | 41 |
| St. Louis University | | 14 |
| Pennsylvania College | 60 | 14 |
| Berkshire Medical Institution | 145 | |
| Willoughby University | 120 | 6 |
| Laporte University | 45 | |
| Castleton Medical College | | 21 |
| Louisiana Medical College | 93 | |
| Kemper Medical College, St. Louis | | 16 |
| Vermont Medical College | | 25 |

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*Guthrie on the Anatomy and Diseases of the Urinary Organs.*—This very instructive and practical work, which has gone through three editions in London, has lately been republished by Messrs. Lea & Blanchard.

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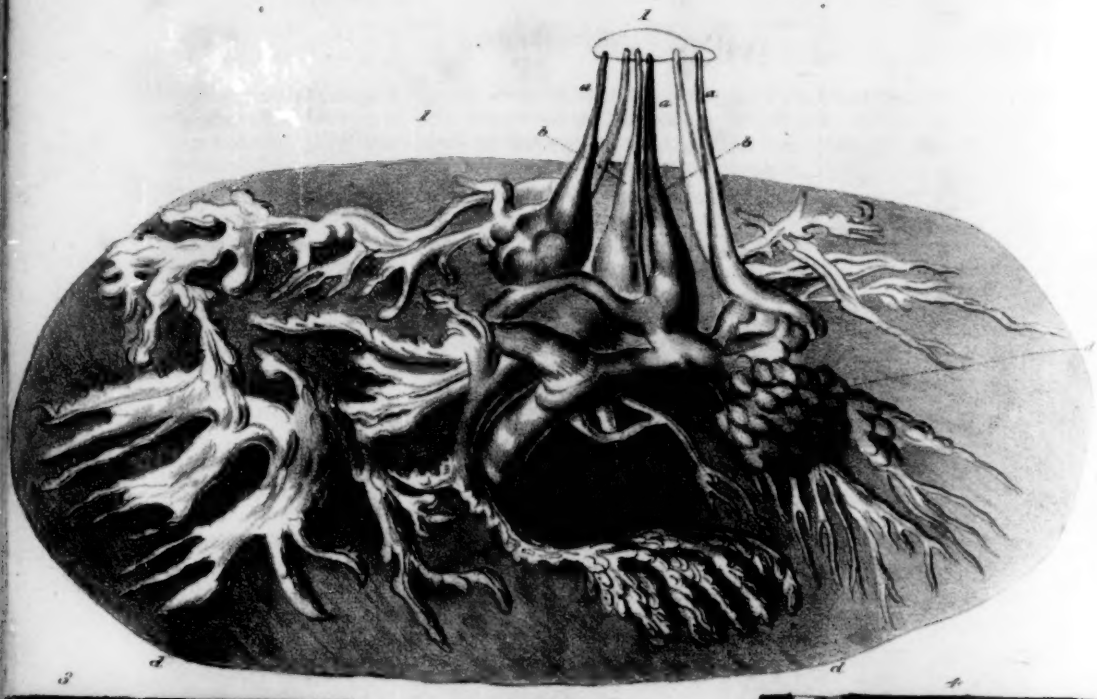
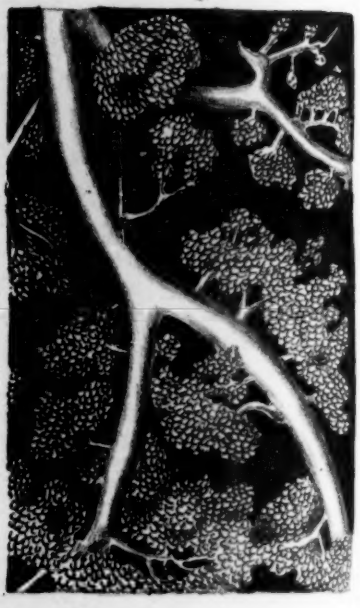
*Copland's Dictionary of Practical Medicine.*—We are happy to announce that the American edition of this work, issued by Harper & Brothers, and edited by Dr. Lee, is advancing rapidly, the ninth No., completing the first volume, having been published. The editor continues to execute his task with great industry and ability; his additions are numerous and valuable.

We wish that we could give an equally satisfactory account of the progress of the *original work*, but we have to state that although upwards of eighteen months have elapsed since the publication of the ninth part of the London edition, which completes the second volume, the tenth has not yet appeared.





Sinclair's Lith.

Fig. 110.

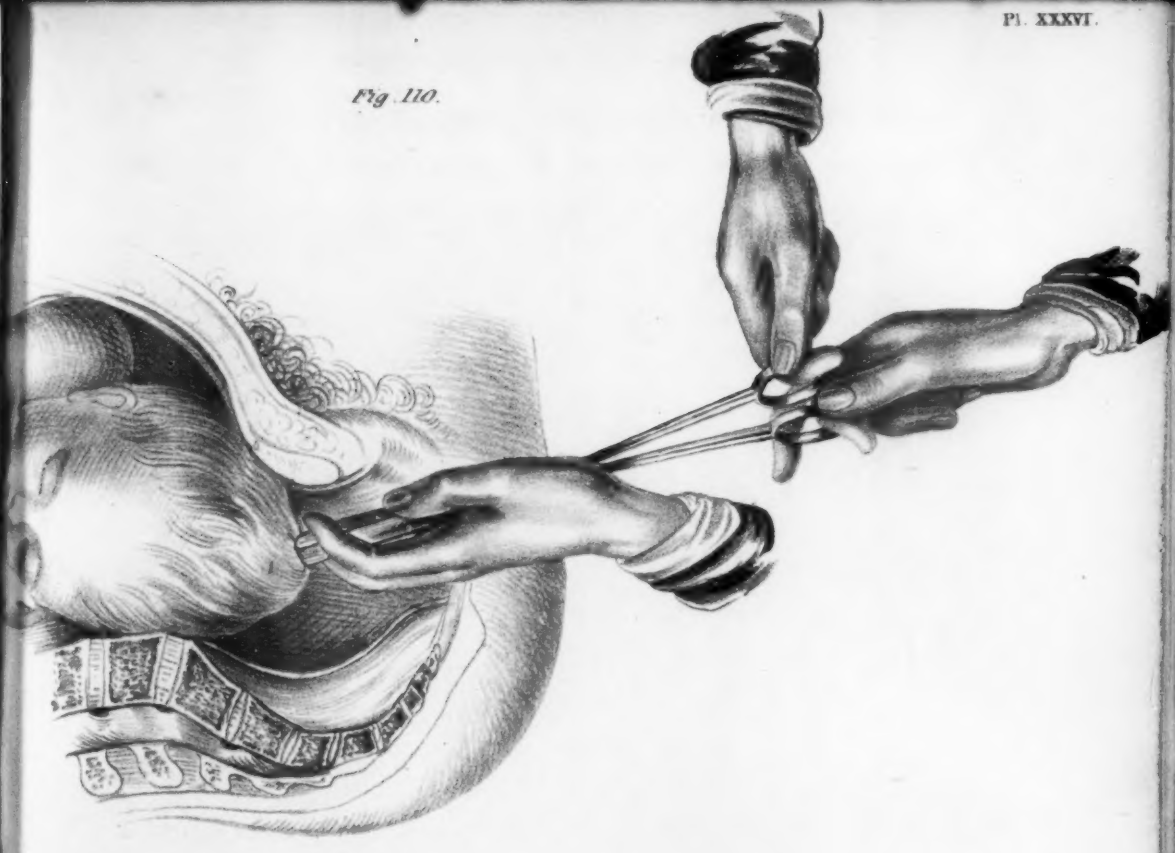


Fig. 109!

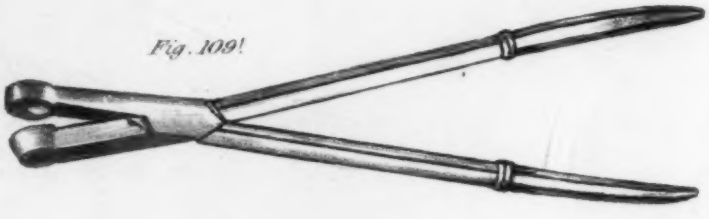
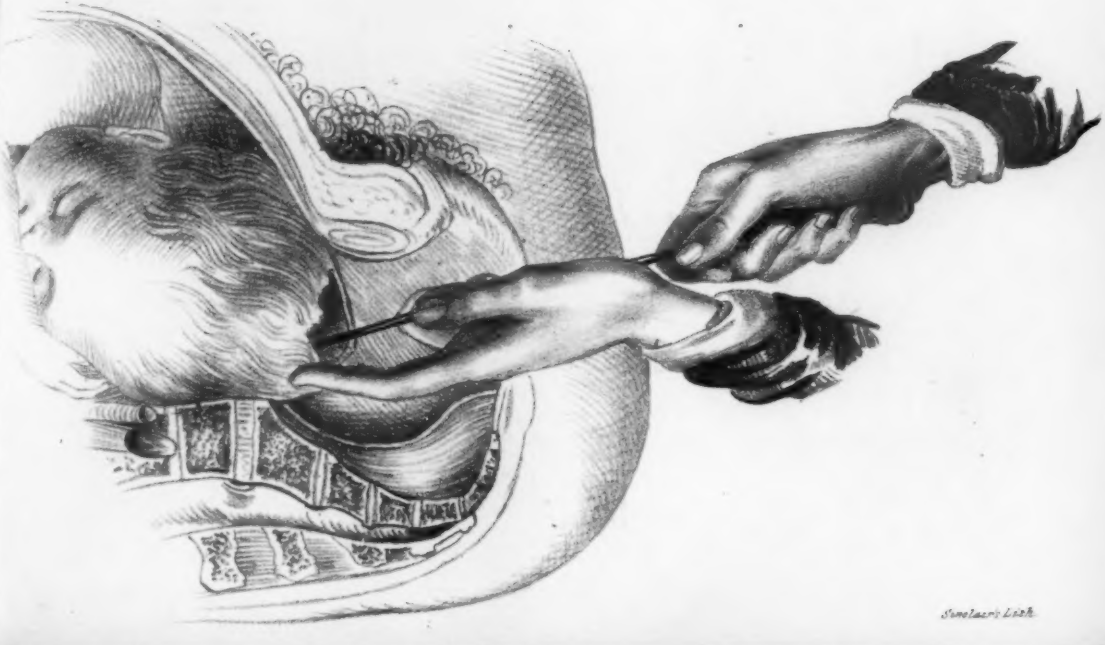



Fig. 111.